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Access DB# 106833

## SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: HELEN PEZZUTO Examiner #: 70059 Date: 10/27/03  
Art Unit: 1913 Phone Number 308-2393 Serial Number: 10/025-588  
Mail Box and Bldg/Room Location: CP3-8B16 Results Format Preferred (circle) PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract. \* KEY WORDS

Title of Invention: SEE ATTACHED cement (additive), concrete,  
mortar

Inventors (please provide full names): ↓

Earliest Priority Filing Date: 12/27/2000

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

A polycarboxylic acid copolymer derived from:

- (1) a polyalkyleneimine monomer with an oxyalkylene group
  - (2) a unsaturated carboxylic acid monomer
  - (3) another polyalkylene glycol unsaturated monomer
  - (4) a thiol chain transfer agent
- \* see page 15 attached in forming (1), then react with (2)

### Examples

- (1) polyethyleneimine-ethylene oxide adduct (see p. 15)
- (2) glycidyl methacrylate, methacrylic acid, acrylic acid, maleic acid (anhydride)
- (3) methoxypolyethylene glycol monomethacrylate
- (4) 3-mercaptopropionic acid, butanethiol

\* Please attach report to pages submitted. THANKS!

### STAFF USE ONLY

	Type of Search	Vendors and cost where applicable
Searcher: <u>K. Fuller</u>	NA Sequence (#) _____	STN <u>✓</u>
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) <u>10</u>	Questel/Orbit _____
Date Searcher Picked Up: _____	Bibliographic _____	Dr. Link _____
Date Completed: <u>10/28/03</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: <u>30</u>	Fulltext _____	Sequence Systems _____
Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____
Online Time: <u>58</u>	Other _____	Other (specify) _____

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Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP  
PROPERTIES for more information. See STNote 27, Searching Properties  
in the CAS Registry File, for complete details:  
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

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FILE COVERS 1907 - 28 Oct 2003 VOL 139 ISS 18  
FILE LAST UPDATED: 27 Oct 2003 (20031027/ED)

This file contains CAS Registry Numbers for easy and accurate  
substance identification.

=> D QUE L23

L2 12 SEA FILE=REGISTRY ABB=ON (106-91-2/BI OR 106-92-3/BI OR  
125121-38-2/BI OR 26915-72-0/BI OR 31694-55-0/BI OR 37371-89-4/  
BI OR 53694-15-8/BI OR 75-21-8/BI OR 760-93-0/BI OR 79-10-7/BI  
OR 79-41-4/BI OR 9002-98-6/BI)  
L5 2 SEA FILE=REGISTRY ABB=ON L2 AND 1-20/N  
L6 5 SEA FILE=REGISTRY ABB=ON L2 AND PROPENOIC  
L7 5 SEA FILE=REGISTRY ABB=ON L2 NOT (L5 OR L6)  
L8 2 SEA FILE=REGISTRY ABB=ON L7 AND PROPENYL  
L9 1 SEA FILE=REGISTRY ABB=ON L8 AND ALPHA

L10 4 SEA FILE=REGISTRY ABB=ON L7 NOT L9  
 L12 6 SEA FILE=REGISTRY ABB=ON L9 OR L6  
 L13 46474 SEA FILE=HCAPLUS ABB=ON L12  
 L14 20517 SEA FILE=HCAPLUS ABB=ON L10  
 L15 8265 SEA FILE=HCAPLUS ABB=ON L5  
 L16 14 SEA FILE=HCAPLUS ABB=ON L13 AND L14 AND L15  
 L17 11421 SEA FILE=HCAPLUS ABB=ON (L13 OR L14 OR L15) (L) (PREP OR IMF OR  
 SPN)/RL  
 L18 4 SEA FILE=HCAPLUS ABB=ON L16 AND L17  
 L19 23913 SEA FILE=HCAPLUS ABB=ON L12/D  
 L20 3864 SEA FILE=HCAPLUS ABB=ON L10/D  
 L21 2119 SEA FILE=HCAPLUS ABB=ON L5/D  
 L22 6 SEA FILE=HCAPLUS ABB=ON L19 AND L20 AND L21  
 L23 7 SEA FILE=HCAPLUS ABB=ON L18 OR L22

=> D L23 ALL 1-7 HITSTR

L23 ANSWER 1 OF 7 HCAPLUS COPYRIGHT 2003 ACS on STN  
 AN 2002:906328 HCAPLUS  
 DN 138:5635  
 TI Azlactone-functional reactive hydrophilic coatings and hydrogels and  
 articles comprising coated substrates useful for immobilization of  
 biological materials  
 IN Haddad, Louis C.; Hembre, James I.; Rasmussen, Jerald K.; Sarpong, Daniel  
 PA 3M Innovative Properties Company, USA  
 SO PCT Int. Appl., 30 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 IC ICM C08F008-32  
 ICS C08F220-56; C08F226-06; C09D133-26; C08J007-12; C08J003-24;  
 C12N011-08; C08K005-17; C08K005-5455; C08L033-26  
 CC 42-3 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 9, 37

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002094890	A1	20021128	WO 2002-US5433	20020222
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003049435	A1	20030313	US 2001-860944	20010518
PRAI US 2001-860944	A	20010518		

AB Surface coatings from azlactone-functional hydrogels and articles  
 comprising a substrate which is a film, a plate, a particle, a fiber, a  
 column, a bead, a web or a membrane with the coatings disposed thereon are  
 disclosed. Methods of making the coating and controlling the gelation  
 time of the hydrogels by providing a suitable crosslinking agent, e.g. a  
 compound containing primary and secondary amino groups are also disclosed. The  
 coatings have residual azlactone functionality which can be used for

covalent attachment (immobilization) of biol. or other functional materials. Thus, a 40% solids Me Et ketone solution of 80:20 weight/weight dimethylacrylamide-vinyldimethylazlactone copolymer prepared by standard free radical polymerization was diluted to 20% solids with isopropanol, formulated with

- enough ethylenediamine to provide a crosslink d. of  $\approx 10\%$  by weight, then applied to a com. 1536-well plate. Upon drying, a reactive, azlactone-functional polymeric coating was obtained within the wells.
- ST azlactone reactive vinyl polymer hydrogel coating immobilization
- IT Silanes  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (ambifunctional, primers; azlactone-functional reactive hydrophilic coatings and hydrogels and articles comprising coated substrates useful for immobilization of biol. materials)
- IT Polyoxyalkylenes, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (amino-terminated, crosslinking agents; azlactone-functional reactive hydrophilic coatings and hydrogels and articles comprising coated substrates useful for immobilization of biol. materials)
- IT Hydrogels  
 Immobilization, molecular  
 Microtiter plates  
 (azlactone-functional reactive hydrophilic coatings and hydrogels and articles comprising coated substrates useful for immobilization of biol. materials)
- IT Ionomers  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (azlactone-functional reactive hydrophilic coatings and hydrogels and articles comprising coated substrates useful for immobilization of biol. materials)
- IT Myoglobins  
 Proteins  
 RL: MSC (Miscellaneous)  
 (azlactone-functional reactive hydrophilic coatings and hydrogels and articles comprising coated substrates useful for immobilization of biol. materials)
- IT Oxides (inorganic), uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (colloidal dispersions, primers; azlactone-functional reactive hydrophilic coatings and hydrogels and articles comprising coated substrates useful for immobilization of biol. materials)
- IT Polyamines  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (crosslinking agents; azlactone-functional reactive hydrophilic coatings and hydrogels and articles comprising coated substrates useful for immobilization of biol. materials)
- IT Polycarbonates, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (films, substrate; azlactone-functional reactive hydrophilic coatings and hydrogels and articles comprising coated substrates useful for immobilization of biol. materials)
- IT Polyester fibers, uses  
 Polyesters, uses  
 Polypropene fibers, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (nonwovens, substrate; azlactone-functional reactive hydrophilic coatings and hydrogels and articles comprising coated substrates useful

- for immobilization of biol. materials)
- IT Amines, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (polyamines, nonpolymeric, primary, crosslinking agents;  
 azlactone-functional reactive hydrophilic coatings and hydrogels and  
 articles comprising coated substrates useful for immobilization of  
 biol. materials)
- IT Crosslinking agents  
 (primary-secondary polyamines and polyether-polyamines;  
 azlactone-functional reactive hydrophilic coatings and hydrogels and  
 articles comprising coated substrates useful for immobilization of  
 biol. materials)
- IT Albumins, miscellaneous  
 RL: MSC (Miscellaneous)  
 (serum, bovine; azlactone-functional reactive hydrophilic coatings and  
 hydrogels and articles comprising coated substrates useful for  
 immobilization of biol. materials)
- IT Glass, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (slides, substrate; azlactone-functional reactive hydrophilic coatings  
 and hydrogels and articles comprising coated substrates useful for  
 immobilization of biol. materials)
- IT Nonwoven fabrics  
 (substrate; azlactone-functional reactive hydrophilic coatings and  
 hydrogels and articles comprising coated substrates useful for  
 immobilization of biol. materials)
- IT 79-06-1DP, Acrylamide, derivs., polymers with azlactone-derived monomers  
**79-10-7DP**, Acrylic acid, hydroxyalkyl esters, polymers with  
 azlactone-derived monomers 79-39-0DP, Methacrylamide, derivs., polymers  
 with azlactone-derived monomers **79-41-4DP**, Methacrylic acid,  
 polymers with azlactone-derived monomers 97-65-4DP, Itaconic acid,  
 polymers with azlactone-derived monomers 100-43-6DP, 4-Vinylpyridine,  
 polymers with azlactone-derived monomers 100-69-6DP, 2-Vinylpyridine,  
 polymers with azlactone-derived monomers 105-16-8DP, 2-Diethylaminoethyl  
 methacrylate, polymers with azlactone-derived monomers 110-16-7DP,  
 Maleic acid, polymers with azlactone-derived monomers 110-17-8DP,  
 Fumaric acid, polymers with azlactone-derived monomers 1121-55-7DP,  
 3-Vinylpyridine, polymers with azlactone-derived monomers 1746-03-8DP,  
 Vinylphosphonic acid, polymers with azlactone-derived monomers  
 2426-54-2DP, 2-Diethylaminoethyl acrylate, polymers with azlactone-derived  
 monomers 15214-89-8DP, 2-Acrylamido-2-methyl-1-propanesulfonic acid,  
 polymers with azlactone-derived monomers 18526-07-3DP,  
 3-Dimethylaminopropyl acrylate, polymers with azlactone-derived monomers  
 20602-77-1DP, 3-Dimethylaminopropyl methacrylate, polymers with  
 azlactone-derived monomers 26914-43-2DP, Styrenesulfonic acid, polymers  
 with azlactone-derived monomers 36885-49-1DP, polymers with  
 azlactone-derived monomers 45021-77-0DP, (3-  
 Acrylamidopropyl)trimethylammonium chloride, polymers with  
 azlactone-derived monomers 87328-05-0DP, reaction products with  
 crosslinked dimethylacrylamide-vinyl dimethylazlactone copolymer  
 477273-94-2P 477273-95-3P 477273-96-4P 477273-97-5P 477273-98-6P  
 RL: **IMF (Industrial manufacture)**; TEM (Technical or engineered  
 material use); **PREP (Preparation)**; USES (Uses)  
 (azlactone-functional reactive hydrophilic coatings and hydrogels and  
 articles comprising coated substrates useful for immobilization of  
 biol. materials)
- IT 7631-86-9, Silica, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)

(beads, substrate; azlactone-functional reactive hydrophilic coatings and hydrogels and articles comprising coated substrates useful for immobilization of biol. materials)

IT 75-21-8D, Ethylene oxide, polymer, amino-terminated 75-56-9D, Propylene oxide, polymer, amino-terminated 109-76-2, 1,3-Propanediamine 124-09-4, 1,6-Hexanediamine, reactions 616-29-5, 1,3-Diamino-2-hydroxypropane 919-30-2, 3-Aminopropyltriethoxysilane 929-59-9 1760-24-3, N-[3-(Trimethoxysilyl)propyl]ethylenediamine 4097-89-6, Tris(2-aminoethyl)amine 4246-51-9, 4,7,10-Trioxa-1,13-tridecanediamine 9046-10-0 24991-53-5

RL: RCT (Reactant); RACT (Reactant or reagent)

(crosslinking agent; azlactone-functional reactive hydrophilic coatings and hydrogels and articles comprising coated substrates useful for immobilization of biol. materials)

IT 24968-12-5, Polybutylene terephthalate 25038-59-9, Polyethylene terephthalate, uses 25085-53-4, Isotactic polypropylene 26062-94-2, Polybutylene terephthalate

RL: TEM (Technical or engineered material use); USES (Uses)

(nonwovens, substrate; azlactone-functional reactive hydrophilic coatings and hydrogels and articles comprising coated substrates useful for immobilization of biol. materials)

IT 9002-85-1, Polyvinylidene chloride

RL: TEM (Technical or engineered material use); USES (Uses)

(primer; azlactone-functional reactive hydrophilic coatings and hydrogels and articles comprising coated substrates useful for immobilization of biol. materials)

IT 9002-98-6

RL: TEM (Technical or engineered material use); USES (Uses)

(primers; azlactone-functional reactive hydrophilic coatings and hydrogels and articles comprising coated substrates useful for immobilization of biol. materials)

IT 67-63-0, Isopropanol, uses 78-93-3, Methyl ethyl ketone, uses

RL: NUU (Other use, unclassified); USES (Uses)

(solvent; azlactone-functional reactive hydrophilic coatings and hydrogels and articles comprising coated substrates useful for immobilization of biol. materials)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) 3m Innovative Properties Co; WO 9953319 A 1999 HCAPLUS

(2) Chabreck, P; WO 9828026 A 1998 HCAPLUS

(3) Hubner, K; US 3583950 A 1971 HCAPLUS

(4) Minnesota Mining & Mfg; WO 8807062 A 1988 HCAPLUS

(5) Minnesota Mining & Mfg; WO 0026725 A 2000 HCAPLUS

(6) Roehm & Haas GmbH; DE 1936155 A 1971 HCAPLUS

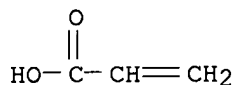
IT 79-10-7DP, Acrylic acid, hydroxyalkyl esters, polymers with azlactone-derived monomers 79-41-4DP, Methacrylic acid, polymers with azlactone-derived monomers

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

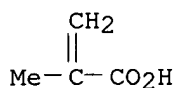
(azlactone-functional reactive hydrophilic coatings and hydrogels and articles comprising coated substrates useful for immobilization of biol. materials)

RN 79-10-7 HCAPLUS

CN 2-Propenoic acid (9CI) (CA INDEX NAME)



RN 79-41-4 HCAPLUS  
CN 2-Propenoic acid, 2-methyl- (9CI) (CA INDEX NAME)



IT 75-21-8D, Ethylene oxide, polymer, amino-terminated  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(crosslinking agent; azlactone-functional reactive hydrophilic coatings and hydrogels and articles comprising coated substrates useful for immobilization of biol. materials)

RN 75-21-8 HCAPLUS  
CN Oxirane (9CI) (CA INDEX NAME)



IT 9002-98-6  
RL: TEM (Technical or engineered material use); USES (Uses)  
(primers; azlactone-functional reactive hydrophilic coatings and hydrogels and articles comprising coated substrates useful for immobilization of biol. materials)

RN 9002-98-6 HCAPLUS  
CN Aziridine, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 151-56-4  
CMF C2 H5 N



L23 ANSWER 2 OF 7 HCAPLUS COPYRIGHT 2003 ACS on STN  
AN 2002:521811 HCAPLUS  
DN 137:79391  
TI Manufacture of polycarboxylic acid type copolymer and their use for cement additives  
IN Yuasa, Tsutomu; Nishikawa, Tomotaka; Sakamoto, Noboru; Hirata, Tsuyoshi; Izukashi, Hiroko; Ueta, Tomiyasu; Tanaka, Hiromichi; Onda, Yoshiyuki; Uno, Toru  
PA Nippon Shokubai Co., Ltd., Japan  
SO PCT Int. Appl., 114 pp.

*applicants*

CODEN: PIXXD2

DT Patent

LA Japanese

IC ICM C08F290-06

ICS C04B024-26; C04B028-02

CC 35-4 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 38, 58

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002053611	A1	20020711	WO 2001-JP11437	20011226
	W: CN, KR, SG				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	US 2002193547	A1	20021219	<u>US 2001-25588</u>	<u>20011226</u>
	JP 2003128738	A2	20030508	JP 2001-395248	20011226
PRAI	JP 2000-399466	A	20001227		
	JP 2001-248276	A	20010817		
	JP 2001-217582	A	20010718		
AB	A polycarboxylic acid type copolymer is produced by copolymerizing a monomer component comprising a polyalkyleneimine type or a polyoxyalkylene type unsaturated monomer and an unsaturated carboxylic acid type monomer. The polycarboxylic acid type copolymer allows the production of a cement composition having improved water reducing property and workability and also yields a hardened product having excellent strength and durability, and thus can be suitably used in producing an ultrahigh strength concrete. Stirring ethoxylated polyethyleneimine with glycidyl methacrylate and polymerization with methoxy polyethylene glycol monomethacrylate, and methacrylic acid in water using 3-mercaptopropionic acid chain transfer agent and NH4S2O8 initiator gave a polycarboxylic acid copolymer additive with weight average mol. weight 17,400.				
ST	polycarboxylic acid copolymer cement additive; methacrylic acid copolymer cement additive; ethoxylated polyethyleneimine glycidyl methacrylate adduct; methoxy polyethylene glycol monomethacrylate copolymer				
IT	Polyoxyalkylenes, preparation RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (acrylic; manufacture of polycarboxylic acid type copolymers and their use for cement additives)				
IT	Cement Mortar Polyelectrolytes (manufacture of polycarboxylic acid type copolymers and their use for cement additives)				
IT	Polyoxyalkylenes, preparation RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polyamine-, acrylic; manufacture of polycarboxylic acid type copolymers and their use for cement additives)				
IT	Polyamines RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polyoxyalkylene-, acrylic; manufacture of polycarboxylic acid type copolymers and their use for cement additives)				
IT	75-21-8DP, Ethylene oxide, reaction product with				



polyethyleneimine, glycidyl methacrylate, and unsatd. carboxylic acids **79-10-7DP**, Acrylic acid, reaction product with methoxy polyethylene glycol monomethacrylate and ethoxylated polyethyleneimine methacrylate **79-41-4DP**, Methacrylic acid, reaction product with methoxy polyethylene glycol monomethacrylate and ethoxylated polyethyleneimine methacrylate **106-91-2DP**, Glycidyl methacrylate, reaction product with ethoxylated polyethyleneimine and unsatd. carboxylic acids **106-92-3DP**, Allyl glycidyl ether, reaction product with ethoxylated triethylenetetraamine and unsatd. carboxylic acids **760-93-0DP**, Methacrylic acid anhydride, reaction product with ethoxylated polyethyleneimine and unsatd. carboxylic acids **9002-98-6DP**, ethoxylated, ester with glycidyl methacrylate, copolymers with unsatd. carboxylic acids **26915-72-0DP**, Methoxy polyethylene glycol monomethacrylate, reaction product with ethoxylated polyethyleneimine and unsatd. carboxylic acids **31694-55-0DP**, Polyoxyethylene glycerol ether, reaction product with glycidyl methacrylate, and unsatd. carboxylic acids **37371-89-4DP**, Ethoxylated triethylenetetramine, reaction product with glycidyl methacrylate, and unsatd. carboxylic acids **53694-15-8DP**, Polyethylene glycol sorbitol ether, reaction product with glycidyl methacrylate, and unsatd. carboxylic acids **125121-38-2P**

RL: **IMF (Industrial manufacture)**; TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(manufacture of polycarboxylic acid type copolymers and their use for cement additives)

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE

- (1) Kao Corp; JP 07247150 A 1995
- (2) Kao Corp; JP 2001146447 A 2001 HCAPLUS
- (3) Kao Corp; JP 2001146449 A 2001 HCAPLUS
- (4) Kao Corp; JP 2001220440 A 2001 HCAPLUS
- (5) Lion Corp; JP 710943 A 1995
- (6) Nippon Shokubai Co Ltd; JP 11269239 A 1999 HCAPLUS
- (7) Nippon Shokubai Co Ltd; JP 2000159555 A 2000 HCAPLUS
- (8) Nippon Shokubai Co Ltd; JP 2000319054 A 2000 HCAPLUS
- (9) Nippon Shokubai Co Ltd; JP 200063164 A 2000
- (10) Toagosei Co Ltd; JP 2000247706 A 2000 HCAPLUS

IT **75-21-8DP**, Ethylene oxide, reaction product with polyethyleneimine, glycidyl methacrylate, and unsatd. carboxylic acids **79-10-7DP**, Acrylic acid, reaction product with methoxy polyethylene glycol monomethacrylate and ethoxylated polyethyleneimine methacrylate **79-41-4DP**, Methacrylic acid, reaction product with methoxy polyethylene glycol monomethacrylate and ethoxylated polyethyleneimine methacrylate **106-91-2DP**, Glycidyl methacrylate, reaction product with ethoxylated polyethyleneimine and unsatd. carboxylic acids **106-92-3DP**, Allyl glycidyl ether, reaction product with ethoxylated triethylenetetraamine and unsatd. carboxylic acids **760-93-0DP**, Methacrylic acid anhydride, reaction product with ethoxylated polyethyleneimine and unsatd. carboxylic acids **9002-98-6DP**, ethoxylated, ester with glycidyl methacrylate, copolymers with unsatd. carboxylic acids **26915-72-0DP**, Methoxy polyethylene glycol monomethacrylate, reaction product with ethoxylated polyethyleneimine and unsatd. carboxylic acids **31694-55-0DP**, Polyoxyethylene glycerol ether, reaction product with glycidyl methacrylate, and unsatd. carboxylic acids **37371-89-4DP**, Ethoxylated triethylenetetramine, reaction product with glycidyl methacrylate, and unsatd. carboxylic acids

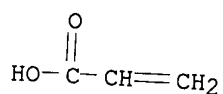
**53694-15-8DP**, Polyethylene glycol sorbitol ether, reaction product with glycidyl methacrylate, and unsatd. carboxylic acids  
**125121-38-2P**

RL: **IMF (Industrial manufacture)**; TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
 (manufacture of polycarboxylic acid type copolymers and their use for cement additives)

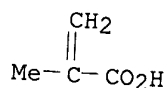
RN 75-21-8 HCAPLUS  
 CN Oxirane (9CI) (CA INDEX NAME)



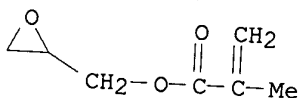
RN 79-10-7 HCAPLUS  
 CN 2-Propenoic acid (9CI) (CA INDEX NAME)



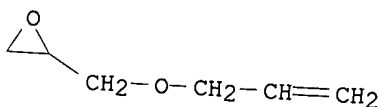
RN 79-41-4 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl- (9CI) (CA INDEX NAME)



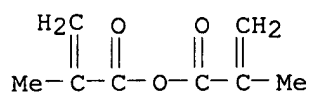
RN 106-91-2 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester (9CI) (CA INDEX NAME)



RN 106-92-3 HCAPLUS  
 CN Oxirane, [(2-propenyloxy)methyl]- (9CI) (CA INDEX NAME)



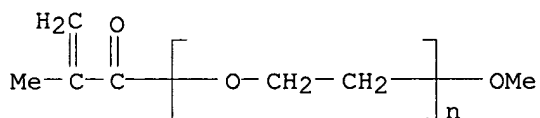
RN 760-93-0 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, anhydride (9CI) (CA INDEX NAME)



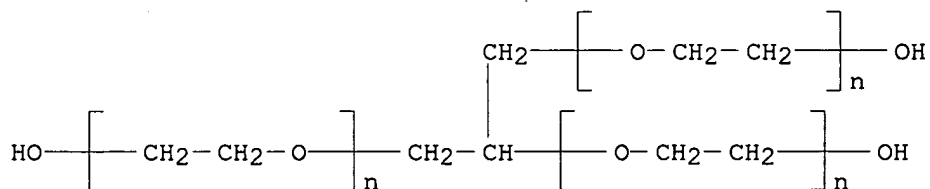
RN 9002-98-6 HCAPLUS  
 CN Aziridine, homopolymer (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 151-56-4  
 CMF C2 H5 N



RN 26915-72-0 HCAPLUS  
 CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -(2-methyl-1-oxo-2-propenyl)- $\omega$ -methoxy- (9CI) (CA INDEX NAME)



RN 31694-55-0 HCAPLUS  
 CN Poly(oxy-1,2-ethanediyl),  $\alpha, \alpha', \alpha''$ -1,2,3-propanetriyltris[ $\omega$ -hydroxy- (9CI) (CA INDEX NAME)]

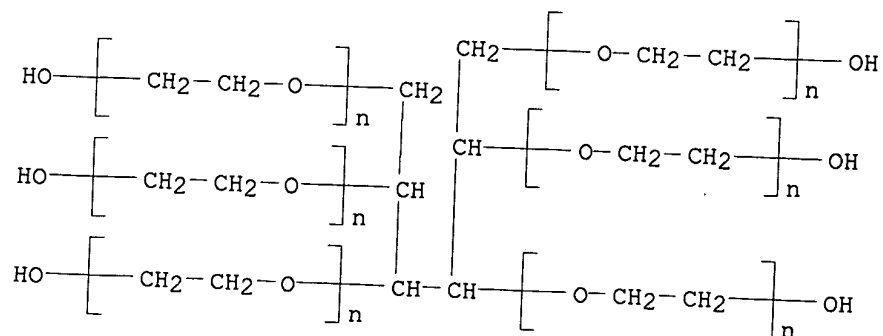


RN 37371-89-4 HCAPLUS  
 CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -hydro- $\omega$ -hydroxy-, ether with 3,6,9,12-tetrakis(2-hydroxyethyl)-3,6,9,12-tetraazatetradecane-1,14-diol (6:1) (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{HO}-\left[\text{CH}_2-\text{CH}_2-\text{O}\right]_n-\text{CH}_2-\text{CH}_2- \\ \text{HO}-\left[\text{CH}_2-\text{CH}_2-\text{O}\right]_n-\text{CH}_2-\text{CH}_2-\text{N}-\text{CH}_2-\text{CH}_2-\text{N}-\text{CH}_2-\text{CH}_2-\text{N} \end{array} \begin{array}{c} \text{CH}_2-\text{CH}_2-\left[\text{O}-\right. \\ \left. \text{CH}_2-\right] \\ \text{CH}_2- \\ \text{CH}_2- \end{array}$$
$$\begin{array}{l} \text{---CH}_2\text{---CH}_2\text{---} \left[ \text{---CH}_2\text{---CH}_2\text{---} \right]_n \text{---OH} \\ \text{---CH}_2\text{---} \left[ \text{---O---CH}_2\text{---CH}_2\text{---} \right]_n \text{---OH} \\ \text{---CH}_2\text{---N} \begin{array}{l} \text{CH}_2\text{---CH}_2\text{---} \left[ \text{---O---CH}_2\text{---CH}_2\text{---} \right]_n \text{---OH} \\ \text{CH}_2\text{---CH}_2\text{---} \left[ \text{---O---CH}_2\text{---CH}_2\text{---} \right]_n \text{---OH} \end{array} \end{array}$$

53694-15-8 HCAPLUS

CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -hydro- $\omega$ -hydroxy-, ether with  
D-glucitol (6:1) (9CI) (CA INDEX NAME)



125121-38-2 HCAPLUS

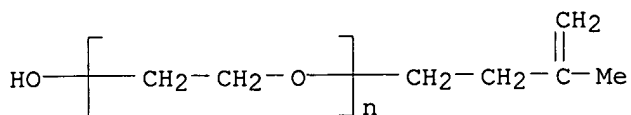
hydroxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 110412-77-6

CMF (C2 H4 O)<sub>n</sub> C5 H10 O

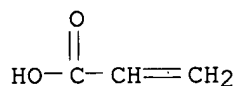
CCI PMS



CM 2

CRN 79-10-7

CMF C3 H4 O2



L23 ANSWER 3 OF 7 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1999:722766 HCAPLUS

DN 131:337562

TI Poly-perfluoroalkyl substituted polyamines as grease proofing agents for paper and foam stabilizers in aqueous fire-fighting foams

IN Jennings, John; Deisenroth, Ted; Haniff, Marlon

PA Ciba Specialty Chemicals Holding Inc., Switz.

SO Eur. Pat. Appl., 25 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM C08G073-02

ICS D21H017-56; D21H021-16; A61C005-02; A62D001-02

CC 35-8 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 43, 50

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 955327	A2	19991110	EP 1999-810366	19990430
	EP 955327	A3	20000322		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	US 6156222	A	20001205	US 1999-234251	19990120
	AU 9926981	A1	19991118	AU 1999-26981	19990506
	AU 743170	B2	20020117		
	BR 9902062	A	20000411	BR 1999-2062	19990506
	CN 1236654	A	19991201	CN 1999-106370	19990510
	JP 2000026601	A2	20000125	JP 1999-128008	19990510
	US 6365676	B1	20020402	US 2000-687972	20001016
PRAI	US 1998-84815P	P	19980508		
	US 1999-234251	A3	19990120		

- AB Title polyamines, such as perfluoroalkyl-allyloxy- and perfluoroalkyl-iodopropoxy-substituted polyaminoacids or poly-RF-fluoroalkyl-substituted polyaminoacids (RF = monovalent perfluorinated alkyl or alkenyl, straight or branched organic radical having 4-20 fully fluorinated carbon atoms), comprise units of perfluoroalkyl-substituted amino groups, hydrophilically substituted amino or amido groups, and substituted amino or amido group, and are useful to provide oil repellency to paper and as foam stabilizers in alc. resistant-aqueous fire-fighting foam compns. Thus, Epomin SP 012 was reacted with allyl glycidyl ether to give a poly-(N-2-hydroxy-4-oxa-6,7-ene heptyl)polyethylenimine, which was further reacted with chloroacetic acid sodium salt, and Zonyl TELA-N perfluoroalkyl iodide, sodium metabisulfite, and 2,2'-azobisisobutyronitrile were added to give a poly-N-2-hydroxy-4-oxa-[6,7-ene and 6-iodo]-7-RF-heptyl-N-carboxymethylene poly(ethylenimine) having good foam stabilizing effect on hot 2-propanol.
- ST perfluoroalkyl substituted polyamine oilproofing agent paper; aq firefighting foam stabilizer; Epomin allyl glycidyl ether reaction product; polyethylenimine chloroacetic acid reaction product; Zonyl perfluoroalkyl iodide polyethylenimine reaction product; azobisisobutyronitrile perfluoroalkyl polyamino acid prep
- IT Foams  
Foams  
(fire-extinguishing; preparation of poly-perfluoroalkyl substituted polyamines as oilproofing agents for paper and foam stabilizers in aqueous fire-fighting foams)
- IT Fire extinguishers  
Fire extinguishers  
Stabilizing agents  
(foams; preparation of poly-perfluoroalkyl substituted polyamines as oilproofing agents for paper and foam stabilizers in aqueous fire-fighting foams)
- IT Sizes (agents)  
(paper; preparation of poly-perfluoroalkyl substituted polyamines as oilproofing agents for paper and foam stabilizers in aqueous fire-fighting foams)
- IT Oilproofing agents  
Paper  
(preparation of poly-perfluoroalkyl substituted polyamines as oilproofing agents for paper and foam stabilizers in aqueous fire-fighting foams)
- IT Polyamines  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(reaction products; preparation of poly-perfluoroalkyl substituted polyamines as oilproofing agents for paper and foam stabilizers in aqueous fire-fighting foams)
- IT 9002-98-6DP, Lupasol PR 8515, reaction products with allyl glycidyl ether, perfluoroalkyl iodides, and acids, amides, and/or glycidyl compds.  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(Lupasol PR 8515; preparation of poly-perfluoroalkyl substituted polyamines as oilproofing agents for paper and foam stabilizers in aqueous fire-fighting foams)
- IT 78-67-1, 2,2'-Azobisisobutyronitrile 13472-08-7, Vazo 67  
RL: CAT (Catalyst use); USES (Uses)  
(free radical initiator; preparation of poly-perfluoroalkyl substituted polyamines as oilproofing agents for paper and foam stabilizers in aqueous fire-fighting foams)

IT 79-07-2DP, 2-Chloroacetamide, reaction products with polyethylenimines and perfluoroalkyl iodides **79-10-7DP**, Acrylic acid, reaction products with polyethylenimines and perfluoroalkyl iodides **106-92-3DP**, Allyl glycidyl ether, reaction products with polyethylenimines and perfluoroalkyl iodides 126-83-0DP, reaction products with polyethylenimines and perfluoroalkyl iodides 355-43-1DP, Perfluorohexyl iodide, reaction products with polyethylenimines 556-52-5DP, Glycidol, reaction products with polyethylenimines and perfluoroalkyl iodides 3033-77-0DP, Quab 151, reaction products with polyethylenimines and perfluoroalkyl iodides 3039-83-6DP, Vinyl sulfonic acid sodium salt, reaction products with polyethylenimines and perfluoroalkyl iodides 3926-62-3DP, Chloroacetic acid sodium salt, reaction products with polyethylenimines and perfluoroalkyl iodides 7785-84-4DP, Sodium trimetaphosphate, reaction products with polyethylenimines and perfluoroalkyl iodides 250151-78-1DP, Zonyl TELA-N, reaction products with polyethylenimines 250151-80-5DP, Zonyl TELA-L, reaction products with polyethylenimines 250151-83-8DP, Zonyl TELB-L, reaction products with polyethylenimines  
 RL: **IMF (Industrial manufacture)**; TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
 (preparation of poly-perfluoroalkyl substituted polyamines as oilproofing agents for paper and foam stabilizers in aqueous fire-fighting foams)

IT **9002-98-6DP**, Lupasol PR 8515, reaction products with allyl glycidyl ether, perfluoroalkyl iodides, and acids, amides, and/or glycidyl compds.  
 RL: **IMF (Industrial manufacture)**; TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
 (Lupasol PR 8515; preparation of poly-perfluoroalkyl substituted polyamines as oilproofing agents for paper and foam stabilizers in aqueous fire-fighting foams)

RN 9002-98-6 HCAPLUS  
 CN Aziridine, homopolymer (9CI) (CA INDEX NAME)

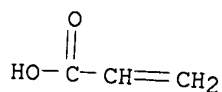
CM 1

CRN 151-56-4  
 CMF C2 H5 N

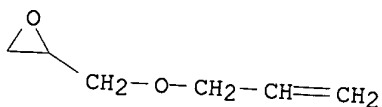


IT **79-10-7DP**, Acrylic acid, reaction products with polyethylenimines and perfluoroalkyl iodides **106-92-3DP**, Allyl glycidyl ether, reaction products with polyethylenimines and perfluoroalkyl iodides  
 RL: **IMF (Industrial manufacture)**; TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
 (preparation of poly-perfluoroalkyl substituted polyamines as oilproofing agents for paper and foam stabilizers in aqueous fire-fighting foams)

RN 79-10-7 HCAPLUS  
 CN 2-Propenoic acid (9CI) (CA INDEX NAME)

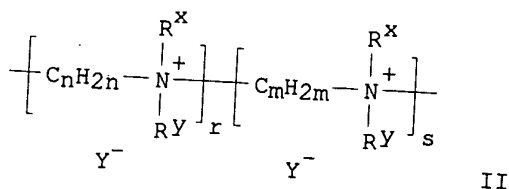
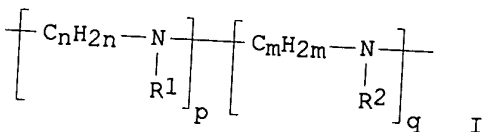


RN 106-92-3 HCAPLUS  
CN Oxirane, [(2-propenyloxy)methyl]- (9CI) (CA INDEX NAME)



L23 ANSWER 4 OF 7 HCAPLUS COPYRIGHT 2003 ACS on STN  
AN 1995:444025 HCAPLUS  
DN 122:201289  
TI Light-sensitive recording material.  
IN Kingma, Arend Jouke; Bronstert, Bernd; Scherr, Guenter; Steuerle, Ulrich  
PA BASF Lacke und Farben AG, Germany  
SO Eur. Pat. Appl., 14 pp.  
CODEN: EPXXDW  
DT Patent  
LA German  
IC ICM G03F007-027  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 599068	A2	19940601	EP 1993-117314	19931026
	EP 599068	A3	19940824		
	R: BE, DE, ES, FR, GB, IT			DE 1992-4239661	19921126
	DE 4239661	A1	19940601		
PRAI	JP 06202330	A2	19940722	JP 1993-283176	19931112
	DE 1992-4239661		19921126		
GI					



AB The title material comprises  $\geq 1$  polymer binder,  $\geq 1$  polymerizable ethylenically unsatd.. organic compound from polyfunctional

KATHLEEN FULLER EIC 1700/PARKER LAW 308-4290



acrylate, a photoinitiator, and a softening agent from a polyalkylene imine derivative I or II or their mixture [n, m = 2-8; p, q = 10-10,000; R1 and R2 = R3CO; R3 = ethylenically unsatd. hydrocarbon; Rx = H, aliphatic, aromatic group; Ry = hydroxyalkyl, hydroxyoxaalkyl, poly(hydroxy)oxaalkyl, Rx, II; Y = RxC02, monovalent anionic group.]. The composition is useful for production of

relief printing plates.

ST photosensitive compn printing plate softening agent; polyalkylene imine softening agent

IT Linseed oil

RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)

(reaction product with polyethyleneimine and glycidyl methacrylate; photosensitive composition for relief printing plate)

IT Printing plates

(relief, photosensitive composition containing polyalkylene imine)

IT 64-19-7D, Acetic acid, reaction product with polyethyleneimine 74-88-4D, Methyl iodide, reaction product with polyethyleneimine and ethylene oxide

75-21-8D, Ethylene oxide, reaction product with polyethyleneimine

75-56-9D, Propylene oxide, reaction product with polyethyleneimine

79-41-4D, Methacrylic acid, reaction product with

polyethyleneimine and acetic acid 106-91-2D, Glycidyl

methacrylate, reaction product with polyethyleneimine and linseed oil

7647-01-0D, Hydrochloric acid, reaction product with polyethyleneimine and

ethylene oxide 9002-98-6D, modified 10563-26-5D, reaction

product with dichloroethylene and acetic acid 25323-30-2D,

Dichloroethylene, reaction product with ethylenedipropylenetetramine and

acetic acid 29722-29-0D, Butane diol monoacrylate, reaction product with

polyethyleneimine and methacrylic acid

RL: DEV (Device component use); MOA (Modifier or additive use); USES

(Uses)

(photosensitive composition for relief printing plate)

IT 75-21-8D, Ethylene oxide, reaction product with polyethyleneimine

79-41-4D, Methacrylic acid, reaction product with

polyethyleneimine and acetic acid 106-91-2D, Glycidyl

methacrylate, reaction product with polyethyleneimine and linseed oil

9002-98-6D, modified

RL: DEV (Device component use); MOA (Modifier or additive use); USES

(Uses)

(photosensitive composition for relief printing plate)

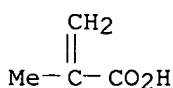
RN 75-21-8 HCAPLUS

CN Oxirane (9CI) (CA INDEX NAME)



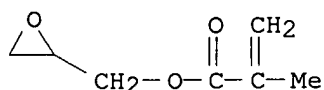
RN 79-41-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl- (9CI) (CA INDEX NAME)



RN 106-91-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester (9CI) (CA INDEX NAME)



RN 9002-98-6 HCAPLUS

CN Aziridine, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 151-56-4

CMF C2 H5 N



L23 ANSWER 5 OF 7 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1995:302816 HCAPLUS

DN 122:56836

TI Water-thinned resin dispersions with good storability and manufacture thereof

IN Uchida, Masaya; Nikashiwa, Toshiki; Minami, Kenji; Izumibayashi, Masuji

PA Nippon Catalytic Chem Ind, Japan

SO Jpn. Kokai Tokkyo Koho, 30 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08F002-20

ICS C08F218-02; C08F220-18; C08F220-36; C08F220-58; C08F222-14;  
C08F226-06; C09D005-00; C09D131-02; C09D133-00; C09J131-02;  
C09J133-00; D06M015-263; D21H019-20

CC 35-4 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 42

FAN.CNT 1

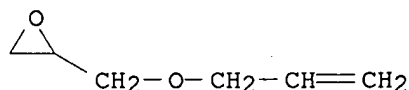
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06192307	A2	19940712	JP 1993-211984	19930826
	JP 2698536	B2	19980119		
	JP 10114847	A2	19980506	JP 1997-197473	19930826
PRAI	JP 1992-229588		19920828		
	JP 1993-211984		19930826		

AB The title dispersions forming films with excellent appearances, water repellency, lubricity, etc. are prepared by radical polymerization of a monomer component containing C9-30 aliphatic hydrocarbonyl group, dispersed as droplets of

volume-average diameter  $\leq 1 \mu\text{m}$  in water with  $\geq 3 \mu\text{m}$ -diameter droplet content  $\leq 5$  volume%. Polymerization of Me methacrylate, styrene, 2-ethylhexyl acrylate, glycidyl methacrylate, stearyl acrylate in water in the presence of AIBN, dodecyl mercaptan-terminated polyacrylic acid ammonium salt gave a 39.8%-solids dispersion with average particle diameter

0.35

μm.  
 ST acrylic polymer aq dispersion  
 IT Epoxides  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (C10-12-alkyl, reaction products with polyethylenimine; water-thinned resin dispersions with good storability)  
 IT Fatty acids, preparation  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (soya, glycidyl methacrylate adducts, polymers; manufacture as stable aqueous dispersions)  
 IT Coating materials  
 (water-thinned, long-chain aliphatic group-containing polymers with good storability)  
 IT **106-92-3D**, Allyl glycidyl ether, reaction products with olefin epoxides and polyethylenimine **9002-98-6D**, Epomin SP-006, reaction products with olefin epoxides 9003-01-4D, Poly(acrylic acid), dodecyl mercaptan-terminated, ammonium salt 38639-64-4D, Acrylic acid-2-hydroxyethyl acrylate copolymer, dodecyl mercaptan-terminated, ammonium salt  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (dispersant; water-thinned resin dispersions with good storability)  
 IT 57-11-4DP, Stearic acid, reaction products with isopropenyloxazoline, polymers **106-91-2DP**, Glycidyl methacrylate, soya fatty acid adducts, polymers 6498-82-4DP, soya fatty acid adducts, polymers 25703-24-6P 25986-77-0P, Poly(stearyl acrylate) 53640-78-1P 63623-16-5P, Poly(nonyl acrylate) 160311-26-2P 160311-27-3P  
 RL: **IMF (Industrial manufacture); PREP (Preparation)**  
 (manufacture as stable aqueous dispersions)  
 IT 577-11-7, Sodium dioctyl sulfosuccinate  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (water-thinned resin dispersions with good storability)  
 IT **106-92-3D**, Allyl glycidyl ether, reaction products with olefin epoxides and polyethylenimine **9002-98-6D**, Epomin SP-006, reaction products with olefin epoxides  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (dispersant; water-thinned resin dispersions with good storability)  
 RN 106-92-3 HCAPLUS  
 CN Oxirane, [(2-propenyloxy)methyl]- (9CI) (CA INDEX NAME)



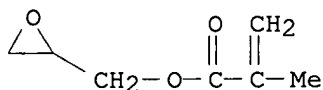
RN 9002-98-6 HCAPLUS  
 CN Aziridine, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 151-56-4  
 CMF C2 H5 N



IT **106-91-2DP**, Glycidyl methacrylate, soya fatty acid adducts, polymers  
 RL: **IMF (Industrial manufacture); PREP (Preparation)**  
 (manufacture as stable aqueous dispersions)  
 RN 106-91-2 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester (9CI) (CA INDEX NAME)



L23 ANSWER 6 OF 7 HCAPLUS COPYRIGHT 2003 ACS on STN  
 AN 1993:540422 HCAPLUS  
 DN 119:140422  
 TI Tough polyamine-acrylate epoxy resin compositions  
 IN Yoshida, Masatoshi; Minami, Kenji; Namura, Ichiro; Izumibayashi, Masuji  
 PA Nippon Shokubai Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 10 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM C08L063-00  
 ICS C08F002-28; C08F020-18; C08L033-10  
 CC 37-6 (Plastics Manufacture and Processing)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04370139	A2	19921222	JP 1991-174347	19910618
	JP 07015041	B4	19950222		
PRAI	JP 1991-174347		19910618		

AB The title compns., with good water resistance and heat resistance, are comprised of reaction products of reactive emulsifiers of modified polyamines and (meth)acrylates, and epoxy resins. Thus, an adhesive composition from Epikote 828 100, HV 953U (amidoamine hardener), and an emulsion prepared by the reaction of Epomin SP 006 and AOE-X 24 to give a modified polyamine and emulsion polymerization with Et acrylate, Me methacrylate, and glycidyl methacrylate, showed shear strength 258 kg/cm<sup>2</sup> initially and 175 kg/cm<sup>2</sup> after 24 h in water at 80°.

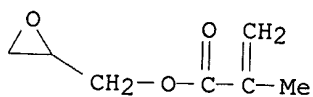
ST emulsion polymn epoxy acrylate tough; polyoxyalkylene polyamine epoxy acrylate compn; emulsifier polymn acrylate polyamine tough

IT Emulsifying agents  
 (acrylate-modified polyamines, epoxy resins containing, tough)

IT Epoxy resins, uses  
 RL: USES (Uses)  
 (modified polyamine-containing, tough)

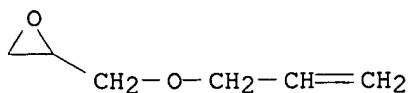
IT Polyamines  
 RL: USES (Uses)  
 (acrylic, emulsions, epoxy resins containing, tough)

- IT Epoxides  
RL: USES (Uses)  
(alkenyl, reaction products with polyethylenimine, Et acrylate, Me methacrylate and glycidyl methacrylate, emulsions, epoxy resin compns. containing)
- IT Amines, compounds  
RL: USES (Uses)  
(poly-, reaction products, with Bu acrylate, styrene and acrylonitrile, emulsions, epoxy resin compns. containing, tough and water-resistant)
- IT Epoxides  
RL: USES (Uses)  
(reaction products, with allyl glycidyl ether, polyamines and acrylic monomers, emulsions, epoxy resin compns. containing)
- IT 25068-38-6, Epikote 828  
RL: USES (Uses)  
(acrylate polyamine-containing, tough and water-resistant)
- IT 80-62-6D, reaction products with  $\alpha$ -olefin epoxides, polyethylenimine, Et acrylate and glycidyl methacrylate 100-42-5D, reaction products with Bu acrylate, modified polyamines and styrene 106-91-2D, reaction products with  $\alpha$ -olefin epoxides, polyethylenimine, Et acrylate and Me methacrylate 106-92-3D, reaction products with epoxides, polyamines and acrylic monomers 107-13-1D, 2-Propenenitrile, reaction products with Bu acrylate, modified polyamines and styrene 140-88-5D, reaction products with  $\alpha$ -olefin epoxides, polyethylenimine, Me methacrylate and glycidyl methacrylate 141-32-2D, reaction products with acrylonitrile, modified polyamines and styrene 2274-11-5D, polymers with modified polyamines and acrylic monomers 9002-98-6D, reaction products with  $\alpha$ -olefin epoxides, Et acrylate, Me methacrylate and glycidyl methacrylate  
RL: USES (Uses)  
(emulsions, epoxy resin compns. containing, tough and water-resistant)
- IT 2426-08-6, Butyl glycidyl ether  
RL: USES (Uses)  
(epoxy resin compns. containing acrylate-modified polyamines and, tough)
- IT 39421-53-9, Araldite HV 953U  
RL: USES (Uses)  
(hardeners, epoxy resin compns. containing acrylate polyamines and, tough)
- IT 101-77-9  
RL: USES (Uses)  
(hardeners, epoxy resin compns. containing acrylate-modified polyamines and, tough)
- IT 106-91-2D, reaction products with  $\alpha$ -olefin epoxides, polyethylenimine, Et acrylate and Me methacrylate 106-92-3D, reaction products with epoxides, polyamines and acrylic monomers 9002-98-6D, reaction products with  $\alpha$ -olefin epoxides, Et acrylate, Me methacrylate and glycidyl methacrylate  
RL: USES (Uses)  
(emulsions, epoxy resin compns. containing, tough and water-resistant)
- RN 106-91-2 HCAPLUS
- CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester (9CI) (CA INDEX NAME)



RN 106-92-3 HCAPLUS

CN Oxirane, [(2-propenyloxy)methyl]- (9CI) (CA INDEX NAME)



RN 9002-98-6 HCAPLUS

CN Aziridine, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 151-56-4

CMF C2 H5 N



L23 ANSWER 7 OF 7 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1986:191928 HCAPLUS

DN 104:191928

TI Concrete admixture and its use

IN Teraji, Tsutomu; Kawada, Kazushige; Takeuchi, Toru; Sugita, Shinichi; Adachi, Toshikazu; Yagi, Hideo

PA Fujisawa Pharmaceutical Co., Ltd. , Japan

SO Eur. Pat. Appl., 33 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM C04B024-28

CC 58-2 (Cement, Concrete, and Related Building Materials)

Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 174644	A1	19860319	EP 1985-111463	19850911
	EP 174644	B1	19881117		
	R: AT, BE, CH, DE, FR, GB, IT, LI, NL, SE				
	CN 85108262	A	19870325	CN 1985-108262	19850907
	AU 8547171	A1	19860320	AU 1985-47171	19850909
	AU 579887	B2	19881215		
	ZA 8506897	A	19860430	ZA 1985-6897	19850909
	CA 1247152	A1	19881220	CA 1985-490286	19850910
	DK 8504142	A	19860313	DK 1985-4142	19850911
	JP 61083663	A2	19860428	JP 1985-202180	19850911
	JP 06099169	B4	19941207		
	BR 8504469	A	19860715	BR 1985-4469	19850911
	AT 38657	E	19881215	AT 1985-111463	19850911
	US 4650522	A	19870317	US 1985-775390	19850912
PRAI	GB 1984-23054		19840912		
	EP 1985-111463		19850911		

AB Concrete admixts., improving the flow properties of the cement mix, comprise polyethyleneimine derivs. with acidic group, acidic

group-substituted alkyl and/or acyl groups or the substituted alkyl groups and carbamoylalkyl and hydroxy-substituted alkyl groups. Thus, 25% mol. equivalent maleic acid was added dropwise to a solution of polyethyleneimine (average mol. weight 10,000) 43.0 g in water 130 mL at 25-40° with stirring and stirred 2 h at room temperature, NaOH 20.0 g in 100 mL water was added with stirring and the mixture stirred 18 h under reflux to give an aqueous solution of poly(disodium 1,2-dicarboxylatoethyl)polyethyleneimine 83.0 g with acidic substitution 11.2%. Thus, mortars from portland cement 520, sand 1040, the admixt. 1.1 g, and water 364 mL had flow 209 and 172 mm in cone tests immediately and 60 min after mixing, resp., vs. 169 and 144 without the additive.

ST acid group substituted polyethyleneimine concrete; carboxylic acid reaction product polyethyleneimine

IT Concrete Mortar (polyethyleneimine reaction product admixts. in, for improved rheol.)

IT 75-21-8D, reaction products with acrylic acid or derivs. and polyethyleneimine 75-56-9D, reaction products with acrylic acid or derivs. and polyethyleneimine 79-06-1D, reaction products with polyethyleneimine 79-10-7D, reaction products with polyethyleneimine 79-11-8D, reaction products with polyethyleneimine and sodium hydroxide 79-41-4D, reaction products with polyethyleneimine and sodium hydroxide 85-44-9D, reaction products with polyethyleneimine and sodium hydroxide 97-65-4D, reaction products with polyethyleneimine 107-13-1D, reaction products with polyethyleneimine 110-16-7D, reaction products with polyethyleneimine 1305-62-0D, reaction products with acrylamide and polyethyleneimine 1310-73-2D, reaction products with carboxylic acid or derivs. and polyethyleneimine 9002-98-6D, reaction products with carboxylic acids 40618-18-6D, reaction products with polyethyleneimine

RL: USES (Uses) (in concrete mix, for improved rheol.)

IT 75-21-8D, reaction products with acrylic acid or derivs. and polyethyleneimine 79-10-7D, reaction products with polyethyleneimine 79-41-4D, reaction products with polyethyleneimine 9002-98-6D, reaction products with carboxylic acids

RL: USES (Uses) (in concrete mix, for improved rheol.)

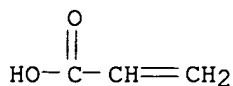
RN 75-21-8 HCAPLUS

CN Oxirane (9CI) (CA INDEX NAME)

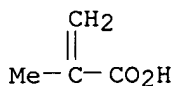


RN 79-10-7 HCAPLUS

CN 2-Propenoic acid (9CI) (CA INDEX NAME)



RN 79-41-4 HCAPLUS  
CN 2-Propenoic acid, 2-methyl- (9CI) (CA INDEX NAME)



RN 9002-98-6 HCAPLUS  
CN Aziridine, homopolymer (9CI) (CA INDEX NAME)

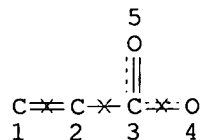
CM 1

CRN 151-56-4  
CMF C2 H5 N



=> => D QUE

L2 12 SEA FILE=REGISTRY ABB=ON (106-91-2/BI OR 106-92-3/BI OR  
125121-38-2/BI OR 26915-72-0/BI OR 31694-55-0/BI OR 37371-89-4/  
BI OR 53694-15-8/BI OR 75-21-8/BI OR 760-93-0/BI OR 79-10-7/BI  
OR 79-41-4/BI OR 9002-98-6/BI)  
L5 2 SEA FILE=REGISTRY ABB=ON L2 AND 1-20/N  
L6 5 SEA FILE=REGISTRY ABB=ON L2 AND PROPENOIC  
L7 5 SEA FILE=REGISTRY ABB=ON L2 NOT (L5 OR L6)  
L8 2 SEA FILE=REGISTRY ABB=ON L7 AND PROPENYL  
L9 1 SEA FILE=REGISTRY ABB=ON L8 AND ALPHA  
L10 4 SEA FILE=REGISTRY ABB=ON L7 NOT L9  
L12 6 SEA FILE=REGISTRY ABB=ON L9 OR L6  
L13 46474 SEA FILE=HCAPLUS ABB=ON L12  
L14 20517 SEA FILE=HCAPLUS ABB=ON L10  
L15 8265 SEA FILE=HCAPLUS ABB=ON L5  
L16 14 SEA FILE=HCAPLUS ABB=ON L13 AND L14 AND L15  
L17 11421 SEA FILE=HCAPLUS ABB=ON (L13 OR L14 OR L15) (L) (PREP OR IMF OR  
SPN)/RL  
L18 4 SEA FILE=HCAPLUS ABB=ON L16 AND L17  
L19 23913 SEA FILE=HCAPLUS ABB=ON L12/D  
L20 3864 SEA FILE=HCAPLUS ABB=ON L10/D  
L21 2119 SEA FILE=HCAPLUS ABB=ON L5/D  
L22 6 SEA FILE=HCAPLUS ABB=ON L19 AND L20 AND L21  
L23 7 SEA FILE=HCAPLUS ABB=ON L18 OR L22  
L24 STR



NODE ATTRIBUTES:



NSPEC IS RC AT 1  
 NSPEC IS RC AT 2  
 NSPEC IS RC AT 3  
 NSPEC IS RC AT 4  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 5

STEREO ATTRIBUTES: NONE  
 L25 STR 2

N-X-C-X-C  
 1 2 3

NODE ATTRIBUTES:  
 NSPEC IS RC AT 1  
 NSPEC IS RC AT 2  
 NSPEC IS RC AT 3  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 3

STEREO ATTRIBUTES: NONE  
 L26 STR 3

C-X-C-X-O  
 1 2 3

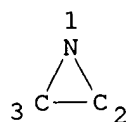
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 NSPEC IS RC AT 2  
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 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

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 NUMBER OF NODES IS 3

STEREO ATTRIBUTES: NONE  
 L28 SCR 2043

L30 84334 SEA FILE=REGISTRY SSS FUL L24 AND L25 AND L26 AND L28  
 L33 36791 SEA FILE=REGISTRY ABB=ON 46.150.18/RID AND L30  
 L34 47543 SEA FILE=REGISTRY ABB=ON L30 NOT L33  
 L35 43604 SEA FILE=REGISTRY ABB=ON L34 NOT 1-10/SI  
 L36 41681 SEA FILE=REGISTRY ABB=ON L35 NOT TRIAZIN?  
 L37 40716 SEA FILE=REGISTRY ABB=ON L36 NOT MORPHOLIN?  
 L38 36224 SEA FILE=REGISTRY ABB=ON L37 NOT (PYRROLI? OR AZEPIN?)  
 L39 STR

84,334 polymers  
 from structures  
 1 and 2 and 3



NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RSPEC I  
 NUMBER OF NODES IS 3

STEREO ATTRIBUTES: NONE  
 L40 STR

CH2-CH2-N-CH2-CH2  
 1 2 3 4 5

NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RSPEC I  
 NUMBER OF NODES IS 5

STEREO ATTRIBUTES: NONE  
 L42 13218 SEA FILE=REGISTRY SUB=L30 SSS FUL (L39 OR L40)  
 L43 6332 SEA FILE=REGISTRY ABB=ON L38 AND L42  
 L44 5022 SEA FILE=REGISTRY ABB=ON L43 NOT AMINIUM  
 L45 4673 SEA FILE=REGISTRY ABB=ON L44 NOT CYCLOHEX?  
 L46 4031 SEA FILE=REGISTRY ABB=ON L45 NOT 1-30/F  
 L47 3323 SEA FILE=HCAPLUS ABB=ON L46  
 L48 1353 SEA FILE=HCAPLUS ABB=ON L47(L) (PREP OR IMF OR SPN)/RL  
 L49 16 SEA FILE=HCAPLUS ABB=ON L48 AND POLYCARBOXYLIC  
 L50 1038 SEA FILE=HCAPLUS ABB=ON L48 AND COPOLYMER?  
 L51 19 SEA FILE=HCAPLUS ABB=ON L48 AND CEMENT#  
 L54 55 SEA FILE=HCAPLUS ABB=ON L50 AND POLYAMINES/IT  
 L55 8 SEA FILE=HCAPLUS ABB=ON L54 AND POLYOXYALKYLENE?/IT  
 L56 42 SEA FILE=HCAPLUS ABB=ON L49 OR L51 OR L55  
 L57 30 SEA FILE=HCAPLUS ABB=ON L50 AND POLYAMINE/IT  
 L58 8 SEA FILE=HCAPLUS ABB=ON L57 AND POLYOXYALKYLENE?/IT  
 L59 44 SEA FILE=HCAPLUS ABB=ON L56 OR L58  
 L60 44 SEA FILE=HCAPLUS ABB=ON L59 NOT L23

=> D L60 1-44 BIB ABS HITIND HITSTR

L60 ANSWER 1 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN  
 AN 2003:673980 HCAPLUS  
 DN 139:198525  
 TI Acrylic polymer-based adhesive compositions for adhesive sheets  
 IN Okochi, Naoki; Ando, Masahiko  
 PA Nitto Denko Corp., Japan  
 SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003238922	A2	20030827	JP 2002-44758	20020221
PRAI	JP 2002-44758		20020221		

AB The composition comprises (A) a hydroxyl group-free acrylic polymer, (B) an amine compound containing plural hydroxyl groups, and (C) a polyisocyanate compound, wherein preferably, the composition has gel fraction 10-70% after dried

or cured. The sheets such as labels and adhesive tapes are obtained by applying supports on  $\geq 1$  side with the adhesives. Thus, a composition comprising 100/5 Bu acrylate-acrylic acid **copolymer** 100, phenolic resin tackifier 20, xylene resin 30, EDP 1100 (ethylenediamine-propylene oxide adduct) 1.5 and Coronate L (polyisocyanate) 4 parts was coated on both sides of a nonwoven fabric to give an adhesive tape showing gel fraction 19% and adhesion strength 15.2 N/20 mm.

IC ICM C09J133-00

ICS C09J007-02; C09J175-04

CC 38-3 (Plastics Fabrication and Uses)

IT Polyurethanes, uses

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(acrylic-~~polyamine-polyoxyalkylene~~-; acrylic polymer-based adhesive compns. for adhesive sheets)

IT **Polyoxyalkylenes**, uses

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(acrylic-~~polyamine~~-polyurethane-; acrylic polymer-based adhesive compns. for adhesive sheets)

IT **Polyamines**

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(acrylic-~~polyoxyalkylene~~-polyurethane-; acrylic polymer-based adhesive compns. for adhesive sheets)

IT **585565-52-2P**

RL: **IMF (Industrial manufacture)**; TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(acrylic polymer-based adhesive compns. for adhesive sheets)

IT **585565-52-2P**

RL: **IMF (Industrial manufacture)**; TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(acrylic polymer-based adhesive compns. for adhesive sheets)

RN 585565-52-2 HCAPLUS

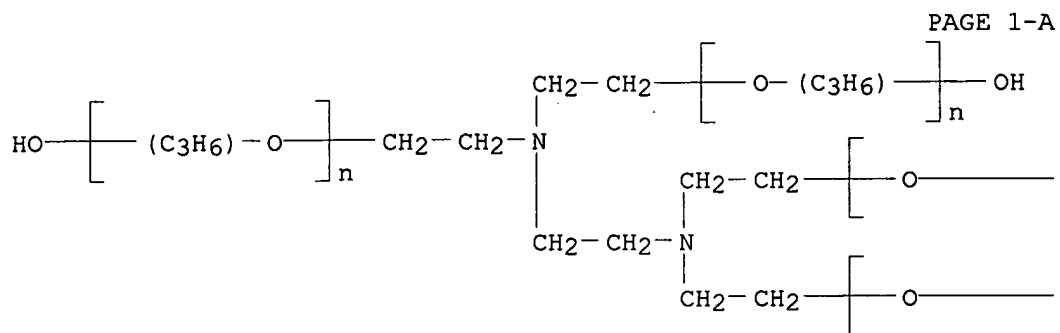
CN 2-Propenoic acid, polymer with butyl 2-propenoate, Coronate L and  $\alpha, \alpha', \alpha'', \alpha'''$ -[1,2-ethanediylbis[nitrilobis(methyl-2,1-ethanediyl)]] tetrakis[ $\omega$ -hydroxypoly[oxy(methyl-1,2-ethanediyl)]] (9CI) (CA INDEX NAME)

CM 1

CRN 51178-86-0

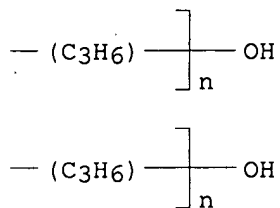
CMF (C3 H6 O)n (C3 H6 O)n (C3 H6 O)n (C3 H6 O)n C14 H32 N2 O4

CCI IDS, PMS



4 ( D1-Me )

PAGE 1-B



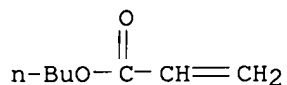
CM 2

CRN 39278-79-0  
 CMF Unspecified  
 CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

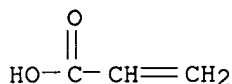
CM 3

CRN 141-32-2  
 CMF C7 H12 O2



CM 4

CRN 79-10-7  
CMF C3 H4 O2



L60 ANSWER 2 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 2003:506596 HCAPLUS

DN 139:70148

TI Use of aqueous adhesives for bonding wood sheets

IN Fuessl, Ruediger; Meyer-Roscher, Bernd; Gerst, Matthias; Smink, Eduard

PA BASF AG, Germany

SO Ger. Offen., 20 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 10253498	A1	20030703	DE 2002-10253498	20021116
PRAI	DE 2001-10160150	A1	20011207		

AB Aqueous adhesives for bonding wood sheets contain dispersed particles of  $\geq 1$  polymer (A1) obtained by radical polymerization in the presence of polymers (A2) formed from 50-99.5%  $\geq 1$  ethylenically unsatd. mono- and(or) dicarboxylic acid, 0.5-50%  $\geq 1$  ethylenically unsatd. compound selected from esters of ethylenically unsatd. monocarboxylic acids and semiesters and diesters of ethylenically unsatd. diacids and  $\geq 1$  OH-containing amine, and  $\leq 20\%$   $\geq 1$  other monomer. Optionally, the adhesives are based on an aqueous solution containing (A) a polymer prepared by radical

polymerization of 5-100% of an ethylenical unsatd. acid anhydride or an anhydride-formable ethylenically unsatd. diacid, and (B) an alkanolamine with  $\geq 2$  OH groups. A typical adhesive contained Acrodur A502/121 [aqueous emulsion prepared by polymerization of styrene 70, Me methacrylate 25, and

hydroxyethyl acrylate 5 parts in the presence of 100 parts polymer prepared from 56% acrylic acid, 24% maleic anhydride, and 20% Uniperol AC (amine emulsifier) and 9 parts triethanolamine] and 30% Epikote 828 (bisphenol A diglycidyl ether polymer) crosslinker.

IC ICM C09D005-12

ICS C09J133-02

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 43

IT Wood

(aqueous adhesives based on amine-containing **polycarboxylic** acid ester and crosslinkers for bonding wood sheets)

IT Adhesives

(water-thinned; aqueous adhesives based on amine-containing **polycarboxylic** acid ester and crosslinkers for bonding wood sheets)

IT 551960-34-0P, Acrylic acid-bisphenol A-epichlorohydrin-2-hydroxyethyl acrylate-maleic anhydride-methyl methacrylate-styrene copolymer triethanolamine ester

RL: IMF (Industrial manufacture); TEM (Technical or engineered material)

use); **PREP** (Preparation); **USES** (Uses)  
 (cured adhesive; aqueous adhesives based on amine-containing  
**polycarboxylic** acid ester and crosslinkers for bonding wood  
 sheets)

IT 165670-41-7P

RL: **IMF** (Industrial manufacture); TEM (Technical or engineered  
 material use); **PREP** (Preparation); **USES** (Uses)  
 (cured adhesive; crosslinkable aqueous amine-containing polymeric carboxylic  
 acid adhesive compns. for bonding wood sheets)

IT 165670-41-7P

RL: **IMF** (Industrial manufacture); TEM (Technical or engineered  
 material use); **PREP** (Preparation); **USES** (Uses)  
 (cured adhesive; crosslinkable aqueous amine-containing polymeric carboxylic  
 acid adhesive compns. for bonding wood sheets)

RN 165670-41-7 HCAPLUS

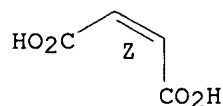
CN 2-Butenedioic acid (2Z)-, polymer with 2,2',2''-nitrilotris[ethanol] and  
 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 110-16-7

CMF C4 H4 O4

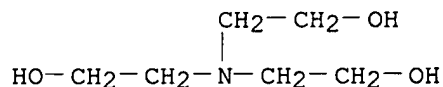
Double bond geometry as shown.



CM 2

CRN 102-71-6

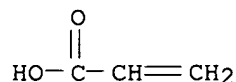
CMF C6 H15 N O3



CM 3

CRN 79-10-7

CMF C3 H4 O2



L60 ANSWER 3 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN  
 AN 2003:469556 HCAPLUS

KATHLEEN FULLER EIC 1700/PARKER LAW 308-4290

DN 139:185518

TI Novel Biodegradable Ternary **Copolymers** hy-PEI-g-PCL-b-PEG:  
Synthesis, Characterization, and Potential as Efficient Nonviral Gene  
Delivery Vectors

AU Shuai, Xintao; Merdan, Thomas; Unger, Florian; Wittmar, Matthias; Kissel,  
Thomas

CS Department of Pharmaceuticals and Biopharmacy, Philipps-University of  
Marburg, Marburg, D-35032, Germany

SO Macromolecules (2003), 36(15), 5751-5759  
CODEN: MAMOBX; ISSN: 0024-9297

PB American Chemical Society

DT Journal

LA English

AB Diblock **copolymers** (MPEG-b-PCLs) of poly( $\epsilon$ -caprolactone)  
(PCL) and monomethoxyl poly(ethylene glycol) (MPEG) were synthesized by  
the conventional ring-opening polymerization of  $\epsilon$ -caprolactone using MPEG  
as a macroinitiator. The monohydroxy-bearing diblock **copolymers**  
were reacted first with maleic anhydride and then with  
N-hydroxysuccinimide (NHS) to yield activated succinimidyl carbonate  
derivs. that are reactive with the primary amino group. Subsequently, a  
new class of biodegradable amphiphilic **copolymer**  
(hy-PEI-g-PCL-b-PEG) was prepared by grafting the activated PCL-b-PEG onto  
the hyperbranched poly(ethylene imine) (hy-PEI). Thermal properties of  
bulk graft **copolymers** were investigated using differential  
scanning calorimetry and thermogravimetric anal. Depending on their  
compsn., these polymers are completely soluble in water or form micelles of  
tens to hundreds of nanometers in size in the studied concentration range, as  
revealed by surface tension and dynamic light scattering measurements of  
**copolymer** solns. Complexation of plasmid DNA (pDNA) with various  
**copolymers** was investigated to achieve particles of ca. 200 nm  
diameter (N/P = 7). **Copolymer** composition was found to affect  
significantly the gene transfection efficiency of polyplexes. In general,  
low graft d. and high mol. weight of PEI blocks favor high gene transfection  
efficiency. All DNA/**copolymer** complexes (N/P = 7) showed a much  
lower  $\xi$ -potential (i.e., neutral or neg.) than the DNA/PEI25 kDa  
complex (21 mV), indicating lower toxicity of **copolymer**-based  
complexes. Lower cytotoxicity of DNA/**copolymer** complexes was  
also demonstrated by the viability of cells in the transfection expts.  
These results indicate that these ternary **copolymers** are  
promising candidates for gene delivery, featuring good biocompatibility,  
potential biodegradability, and relatively high gene transfection  
efficiency. Their neutral surface charge offers potential for i.v.  
administration.

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 35

ST PEI PEG ternary **copolymer** DNA gene delivery

IT DNA

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP  
(Physical process); THU (Therapeutic use); BIOL (Biological study); PROC  
(Process); USES (Uses)

(plasmid; synthesis, characterization, and potential as efficient  
nonviral gene delivery vectors of a novel biodegradable ternary  
**copolymers** hy-PEI-g-PCL-b-PEG)

IT **Polyoxyalkylenes**, biological studies

RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use);  
BIOL (Biological study); PREP (Preparation); USES (Uses)

(**polyamine**-polyester-, block; synthesis, characterization,  
and potential as efficient nonviral gene delivery vectors of a novel

- biodegradable ternary **copolymers** hy-PEI-g-PCL-b-PEG)
- IT Polyesters, biological studies  
 RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use);  
 BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (polyamine-polyoxyalkylene-, block; synthesis,  
 characterization, and potential as efficient nonviral gene delivery  
 vectors of a novel biodegradable ternary **copolymers**  
 hy-PEI-g-PCL-b-PEG)
- IT **Polyamines**  
 RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use);  
 BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (polyester-polyoxyalkylene-, block; synthesis,  
 characterization, and potential as efficient nonviral gene delivery  
 vectors of a novel biodegradable ternary **copolymers**  
 hy-PEI-g-PCL-b-PEG)
- IT Critical micelle concentration  
 Genetic vectors  
 Glass transition temperature  
 Particle size  
 Solubility  
 Surface tension  
 Thermal decomposition  
 Transformation, genetic  
 Zeta potential  
 (synthesis, characterization, and potential as efficient nonviral gene  
 delivery vectors of a novel biodegradable ternary **copolymers**  
 hy-PEI-g-PCL-b-PEG)
- IT 9014-00-0, Luciferase  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP  
 (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC  
 (Process); USES (Uses)  
 (synthesis, characterization, and potential as efficient nonviral gene  
 delivery vectors of a novel biodegradable ternary **copolymers**  
 hy-PEI-g-PCL-b-PEG)
- IT **579439-08-0P**  
 RL: PRP (Properties); **SPN (Synthetic preparation)**; THU  
 (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**;  
 USES (Uses)  
 (synthesis, characterization, and potential as efficient nonviral gene  
 delivery vectors of a novel biodegradable ternary **copolymers**  
 hy-PEI-g-PCL-b-PEG)
- IT 6066-82-6D, N-Hydroxy succinimide, reaction products with PEG-caprolactone  
**copolymer** 9002-98-6  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (synthesis, characterization, and potential as efficient nonviral gene  
 delivery vectors of a novel biodegradable ternary **copolymers**  
 hy-PEI-g-PCL-b-PEG)
- IT 108-31-6DP, Maleic anhydride, reaction products with PEG-caprolactone  
**copolymer** 263237-87-2P 579439-05-7P 579439-07-9P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (synthesis, characterization, and potential as efficient nonviral gene  
 delivery vectors of a novel biodegradable ternary **copolymers**  
 hy-PEI-g-PCL-b-PEG)
- IT **579439-08-0P**  
 RL: PRP (Properties); **SPN (Synthetic preparation)**; THU  
 (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**;  
 USES (Uses)



(synthesis, characterization, and potential as efficient nonviral gene delivery vectors of a novel biodegradable ternary **copolymers** hy-PEI-g-PCL-b-PEG)

RN 579439-08-0 HCAPLUS

CN 2-Oxepanone, polymer with oxirane, mono[hydrogen (2Z)-2-butenedioate], methyl ether, block, polymer with aziridine, graft (9CI) (CA INDEX NAME)

CM 1

CRN 151-56-4

CMF C2 H5 N



CM 2

CRN 579439-05-7

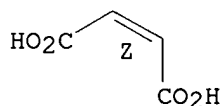
CMF (C6 H10 O2 . C2 H4 O)x . C4 H4 O4 . C H4 O

CM 3

CRN 110-16-7

CMF C4 H4 O4

Double bond geometry as shown.



CM 4

CRN 67-56-1

CMF C H4 O

H<sub>3</sub>C-OH

CM 5

CRN 107596-21-4

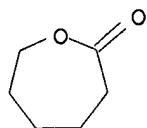
CMF (C6 H10 O2 . C2 H4 O)x

CCI PMS

CM 6

CRN 502-44-3

CMF C6 H10 O2



CM 7

CRN 75-21-8

CMF C2 H4 O



RE.CNT 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

- L60 ANSWER 4 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN  
AN 2003:430745 HCAPLUS  
DN 139:214851  
TI Synthesis and cholesterol-lowering effect of poly(ethylene glycol)-polyamine graft and block polymers  
AU Nakamura, Tohru; Hamamich, Yoshiko; Uehara, Keiji; Ishii, Takehiko; Hayashi, Hisato; Nagasaki, Yukio; Kataoka, Kazunori  
CS Self Medication Laboratories, Taisho Pharmaceutical Co., Ltd., Saitamashi, Saitama, 330-8530, Japan  
SO Kobunshi Ronbunshu (2003), 60(5), 238-240  
CODEN: KBRBA3; ISSN: 0386-2186  
PB Kobunshi Gakkai  
DT Journal  
LA Japanese  
AB Both water-soluble graft and block **copolymers** consisting of poly(ethylene glycol) segment and polyamine segment were synthesized via our original synthetic technique. Oral administrations of these **copolymers** to high cholesterol diet fed rats showed an effective reduction of plasma cholesterol, indicating that bile acids were effectively bound to the polymers and excreted from the GI tract. The PEG/polyamine **copolymer** thus prepared is promising as a high performance cholesterol-lowering agent.  
CC 35-8 (Chemistry of Synthetic High Polymers)  
Section cross-reference(s): 1  
IT **Polyoxyalkylenes**, preparation  
RL: BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)  
(block; synthesis and cholesterol-lowering effect of poly(ethylene glycol)-**polyamine** graft and block polymers)  
IT **Polyoxyalkylenes**, preparation  
RL: BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)  
(graft polymers; synthesis and cholesterol-lowering effect of poly(ethylene glycol)-**polyamine** graft and block polymers)  
IT Anticholesteremic agents

(synthesis and cholesterol-lowering effect of poly(ethylene glycol)-  
polyamine graft and block polymers)

IT 260426-24-2P 590424-06-9P, Polyethylene glycol methyl  
ether methacrylate-diethylaminoethyl methacrylate graft copolymer  
590424-07-0P 591206-05-2P 591206-08-5P, Diethylaminoethyl  
methacrylate-ethylene oxide graft copolymer methyl ether  
RL: BSU (Biological study, unclassified); SPN (Synthetic  
preparation); BIOL (Biological study); PREP (Preparation)  
(synthesis and cholesterol-lowering effect of poly(ethylene glycol)-  
polyamine graft and block polymers)

IT 260426-24-2P 590424-06-9P, Polyethylene glycol methyl  
ether methacrylate-diethylaminoethyl methacrylate graft copolymer  
591206-08-5P, Diethylaminoethyl methacrylate-ethylene oxide graft  
copolymer methyl ether  
RL: BSU (Biological study, unclassified); SPN (Synthetic  
preparation); BIOL (Biological study); PREP (Preparation)  
(synthesis and cholesterol-lowering effect of poly(ethylene glycol)-  
polyamine graft and block polymers)

RN 260426-24-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(diethylamino)ethyl ester, polymer with  
oxirane, monomethyl ether, block (9CI) (CA INDEX NAME)

CM 1

CRN 67-56-1

CMF C H4 O

H<sub>3</sub>C-OH

CM 2

CRN 214957-23-0

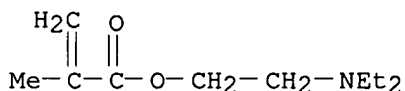
CMF (C10 H19 N O2 . C2 H4 O)x

CCI PMS

CM 3

CRN 105-16-8

CMF C10 H19 N O2



CM 4

CRN 75-21-8

CMF C2 H4 O



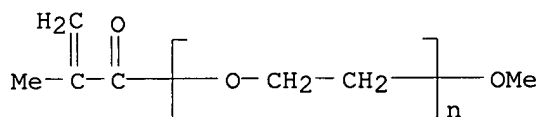
RN 590424-06-9 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 2-(diethylamino)ethyl ester, polymer with  
 $\alpha$ -(2-methyl-1-oxo-2-propenyl)- $\omega$ -methoxypoly(oxy-1,2-ethanediyl), graft (9CI) (CA INDEX NAME)

CM 1

CRN 26915-72-0

CMF (C2 H4 O)<sub>n</sub> C5 H8 O2

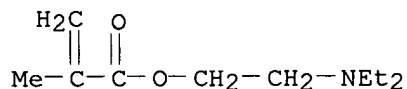
CCI PMS



CM 2

CRN 105-16-8

CMF C10 H19 N O2

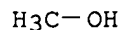


RN 591206-08-5 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 2-(diethylamino)ethyl ester, polymer with  
 oxirane, methyl ether, graft (9CI) (CA INDEX NAME)

CM 1

CRN 67-56-1

CMF C H4 O



CM 2

CRN 591206-07-4

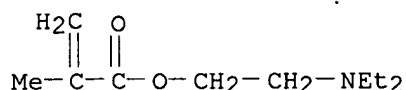
CMF (C10 H19 N O2 . C2 H4 O)<sub>x</sub>

CCI PMS

CM 3

CRN 105-16-8

CMF C10 H19 N O2



CM 4

CRN 75-21-8

CMF C2 H4 O



L60 ANSWER 5 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 2003:132559 HCAPLUS

DN 138:172295

TI Laundering detergent compositions with suppressed resoiling of clothes by clays during washing

IN Akasaki, Kazumoto; Morimoto, Masakazu; Saeki, Takuya; Fujii, Yoshikazu; Yamaguchi, Shigeru

PA Nippon Shokubai Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003049194	A2	20030221	JP 2001-241464	20010808
PRAI	JP 2001-241464		20010808		

AB The compns. contain polymers having anionic groups and cationic groups that are manufactured by aminoethylation of some of the anionic groups in anionic polymers. Thus, polyethylene glycol monomethyl ether was reacted with maleic anhydride, polymerized with acrylic acid, further reacted with ethyleneimine, and mixed with surfactants to give a detergent compns. showing good clay dispersibility and washing power for cotton fabrics.

IC ICM C11D003-37

ICS C08F008-32

CC 46-5 (Surface Active Agents and Detergents)

IT **Polyamines**

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(acrylic, graft; acrylic polymers containing cationic and anionic groups manufactured by aminoethylation for anti-resoiling laundering detergent)

IT **Polyoxyalkylenes, uses**

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polyamine-, graft, acrylic; acrylic polymers containing cationic and anionic groups manufactured by aminoethylation for anti-resoiling laundering detergent)

IT **Polyamines**

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polyoxyalkylene-, graft, acrylic; acrylic polymers containing cationic and anionic groups manufactured by aminoethylation for anti-resoiling laundering detergent)

IT 497221-97-3P 497221-98-4P 497818-85-6P, Acrylic acid-ethyleneimine-ethylene oxide graft copolymer methyl ether  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(acrylic polymers containing cationic and anionic groups manufactured by aminoethylation for anti-resoiling laundering detergent)

IT 497221-97-3P 497818-85-6P, Acrylic acid-ethyleneimine-ethylene oxide graft copolymer methyl ether  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(acrylic polymers containing cationic and anionic groups manufactured by aminoethylation for anti-resoiling laundering detergent)

RN 497221-97-3 HCAPLUS

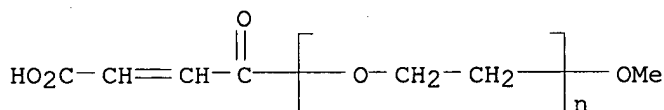
CN 2-Propenoic acid, polymer with aziridine and  $\alpha$ -[(2Z)-3-carboxy-1-oxo-2-propenyl]- $\omega$ -methoxypoly(oxy-1,2-ethanediyl), graft (9CI) (CA INDEX NAME)

CM 1

CRN 31833-82-6

CMF (C2 H4 O)<sub>n</sub> C5 H6 O4

CCI PMS



CM 2

CRN 151-56-4

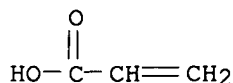
CMF C2 H5 N



CM 3

CRN 79-10-7

CMF C3 H4 O2



RN 497818-85-6 HCAPLUS  
 CN 2-Propenoic acid, polymer with aziridine and oxirane, methyl ether, graft  
 (9CI) (CA INDEX NAME)

CM 1

CRN 67-56-1  
 CMF C H4 O

H<sub>3</sub>C-OH

CM 2

CRN 497818-84-5  
 CMF (C3 H4 O2 . C2 H5 N . C2 H4 O)x  
 CCI PMS

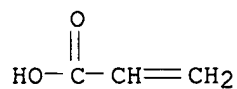
CM 3

CRN 151-56-4  
 CMF C2 H5 N



CM 4

CRN 79-10-7  
 CMF C3. H4 O2



CM 5

CRN 75-21-8  
 CMF C2 H4 O



L60 ANSWER 6 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN  
 AN 2002:538098 HCAPLUS

KATHLEEN FULLER EIC 1700/PARKER LAW 308-4290

DN 137:110740  
 TI Compositions for the production of molded shapes from finely divided materials  
 IN Kroner, Matthias; Gerst, Matthias; Reck, Bernd  
 PA Basf A.-G., Germany  
 SO Ger. Offen., 20 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 10101944	A1	20020718	DE 2001-10101944	20010117
	US 2002130439	A1	20020919	US 2002-44948	20020115
	EP 1225193	A2	20020724	EP 2002-1203	20020116
	EP 1225193	A3	20030423		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

PRAI DE 2001-10101944 A 20010117

OS MARPAT 137:110740

AB Compns. containing reaction products of  $\text{HOCOCHYCXRCO}_2\text{H}$  (I, R = H or  $\text{CH}_2\text{CO}_2\text{H}$ , X = OH or  $\text{NH}_2$  when Y = H, Y = OH or  $\text{NH}_2$  when X = H, XY =  $\pi$  bond) and(or) their anhydrides with  $\text{NH}_3$  and, optionally, primary amines and(or) polyols or a mixture of I and(or) their anhydride and heat-sensitive,  $\text{NH}_3$ -forming compound and, optionally, primary amines and(or) polyols are useful as thermally hardenable binders for manufacture of moldings from finely divided materials (such as wood fibers) and strengthening of sheets from fibrous materials (such as natural fiber mats). A typical particleboard composition was manufacture by spraying a 40% aqueous solution of maleic acid monoamide (II) onto 180 g wood fiber and drying to 7% moisture content, so that the composition contained 20 g II.

IC ICM C09D005-12

ICS C09D177-00; C09D123-00; C08J005-04; C08J003-24; D04H001-42

CC 43-9 (Cellulose, Lignin, Paper, and Other Wood Products)  
 Section cross-reference(s): 58

ST **polycarboxylic** ammonia adduct polymer binder finely divided material molding; maleic acid monoamide polymer binder particleboard

IT 29996-04-1P, Maleic acid monoamide homopolymer 31586-29-5P, Poly(2,5-dioxo-1,3-pyrrolidinediyl) 39444-67-2P, Maleic acid ammonium salt homopolymer 172280-28-3P, Ammonium carbonate-maleic anhydride copolymer **442844-21-5P** 442844-23-7P, Ammonium carbonate-malic acid-triethanolamine copolymer 442844-25-9P, Ammonium carbonate-citric acid-triethanolamine copolymer **442844-27-1P**, Maleic acid monoamide-triethanolamine copolymer

RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM  
 (Technical or engineered material use); **PREP (Preparation)**; USES  
 (Uses)

(compns. containing succinimide polymer-forming compds. for thermal production

of molded shapes from finely divided materials)

IT **442844-21-5P 442844-27-1P**, Maleic acid monoamide-triethanolamine copolymer

RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM  
 (Technical or engineered material use); **PREP (Preparation)**; USES  
 (Uses)

(compns. containing succinimide polymer-forming compds. for thermal production



of molded shapes from finely divided materials)

RN 442844-21-5 HCAPLUS

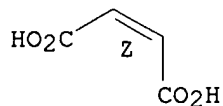
CN 2-Butenedioic acid (2Z)-, ammonium salt, polymer with 2,2',2''-nitrilotris[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 13716-99-9

CMF C4 H4 O4 . x H3 N

Double bond geometry as shown.

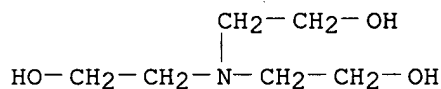


● x NH3

CM 2

CRN 102-71-6

CMF C6 H15 N O3



RN 442844-27-1 HCAPLUS

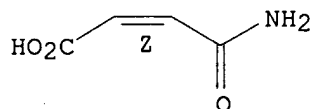
CN 2-Butenoic acid, 4-amino-4-oxo-, (2Z)-, polymer with 2,2',2''-nitrilotris[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 557-24-4

CMF C4 H5 N O3

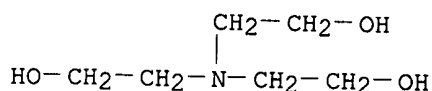
Double bond geometry as shown.



CM 2

CRN 102-71-6

CMF C6 H15 N O3

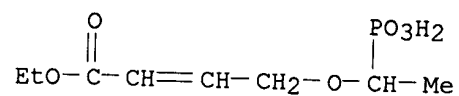


L60 ANSWER 7 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN  
 AN 2002:536415 HCAPLUS  
 DN 137:94558  
 TI Unsaturated polyfunctional amide-based polymer dental material  
 IN Moszner, Norbert; Zeuner, Frank; Rheinberger, Volker; Angermann, Jorg;  
 Voelkel, Thomas  
 PA Ivoclar Vivadent AG, Liechtenstein  
 SO Eur. Pat. Appl., 18 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1222910	A2	20020717	EP 2002-118	20020103
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	DE 10101523	A1	20020801	DE 2001-10101523	20010115
	JP 2002212019	A2	20020731	JP 2002-5383	20020111
	US 2002143138	A1	20021003	US 2002-45358	20020114
PRAI	DE 2001-10101523	A	20010115		
	US 2001-289097P	P	20010507		
AB	Polymers based on compds. having 2-5 $\alpha,\beta$ -unsatd. amide groups are hydrolysis resistant and are useful for dental materials. A typical polymer was manufactured by polymerization of ethylenebisacrylamide.				
IC	ICM A61K006-083				
CC	37-3 (Plastics Manufacture and Processing) Section cross-reference(s): 63				
IT	Dental materials and appliances (cements; unsatd. polyfunctional amide-based polymer with good hydrolysis resistance for dental materials)				
IT	<b>442573-55-9p</b> RL: <b>IMF (Industrial manufacture)</b> ; TEM (Technical or engineered material use); <b>PREP (Preparation)</b> ; USES (Uses) (cured dental adhesive; unsatd. polyfunctional amide-based polymer with good hydrolysis resistance for dental materials)				
IT	<b>442573-55-9p</b> RL: <b>IMF (Industrial manufacture)</b> ; TEM (Technical or engineered material use); <b>PREP (Preparation)</b> ; USES (Uses) (cured dental adhesive; unsatd. polyfunctional amide-based polymer with good hydrolysis resistance for dental materials)				
RN	442573-55-9 HCAPLUS				
CN	2-Butenoic acid, 4-(1-phosphonoethoxy)-, 1-ethyl ester, polymer with 2-hydroxyethyl 2-methyl-2-propenoate, N,N'-1,3-propanediylbis[N-ethyl-2-propenamide] and 1,2,3-propanetriol bis(2-methyl-2-propenoate) (9CI) (CA INDEX NAME)				

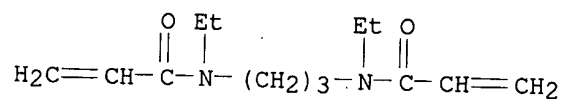
CM 1

CRN 442573-54-8  
 CMF C8 H15 O6 P



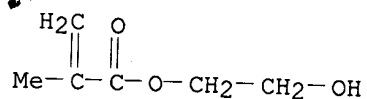
CM 2

CRN 442200-41-1  
CMF C13 H22 N2 O2



CM 3

CRN 868-77-9  
CMF C6 H10 O3

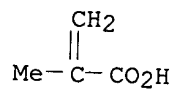


CM 4

CRN 28497-59-8  
CMF C11 H16 O5  
CCI IDS

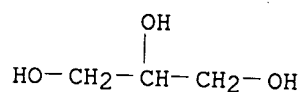
CM 5

CRN 79-41-4  
CMF C4 H6 O2



CM 6

CRN 56-81-5  
CMF C3 H8 O3



L60 ANSWER 8 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN  
 AN 2002:169789 HCAPLUS  
 DN 136:233650  
 TI resin compositions for storage-stable and low-temperature-curable coatings  
 having good adhesion to various substrates  
 IN Kageishi, Ichiji; Osanai, Yoshitaka; Ando, Yumi  
 PA Toray Industries, Inc., Japan  
 SO Jpn. Kokai Tokkyo Koho, 23 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002069363	A2	20020308	JP 2000-255467	20000825
PRAI	JP 2000-255467		20000825		

AB Title comps. comprise hardeners and resin blends consisting of  
 alkoxy-containing unsatd. compound-polymerized acrylic resins with a  
 number-average mol.  
 weight (Mn) of 500-80,000 and epoxy group-containing unsatd. compound  
 (EU)-polymerized  
 acrylic resins with Mn of 500-80,000 at unreacted EU of ≤5,000 ppm  
 in total resin blends. A composition comprising acetylacetone, Al  
 tris(acetylacetonate), and a blend of 20% Me methacrylate (I)-SZ 6030  
 copolymer and 80% I-Bu acrylate-Bu methacrylate-Cyclomer A 200 copolymer  
 (unreacted Cyclomer A 200 of 50 ppm) was diluted with organic solvents to form  
 a clear coat with good storage stability at 23° or 40° for 1  
 mo, which was sprayed on an Al alloy, glass, ABS, or slate plate to a  
 40-μm thickness, and baked at 80° for 30 min to form a film  
 showing good adhesion to the plate and good blocking and weather  
 resistance.

IC ICM C09D143-04  
 ICS C09D133-04; C09D151-00; C09D163-00; C09D175-04

CC 42-10 (Coatings, Inks, and Related Products)

IT **Cement**  
 (asbestos, slate, substrates; alkoxyethyl-containing and epoxy-containing  
 acrylic resin-based low-temperature-curable coatings with good adhesion to  
 various substrates)

IT 26936-30-1P, Methyl methacrylate-SZ 6030 copolymer 146241-49-8P, Butyl  
 acrylate-butyl methacrylate-methyl methacrylate-Cyclomer A 200 copolymer  
 318988-59-9P, Butyl acrylate-butyl methacrylate-2-hydroxyethyl  
 methacrylate-methyl methacrylate-Cyclomer A 200 copolymer 403500-04-9P,  
 Butyl acrylate-butyl methacrylate-3-glycidoxypropyltrimethoxysilane-2-  
 hydroxyethyl methacrylate-3-methacryloxypropyltrimethoxysilane-methyl  
 methacrylate-Cyclomer A 200 copolymer 403500-05-0P, Butyl acrylate-butyl  
 methacrylate-2-hydroxyethyl methacrylate-3-methacryloxypropyltrimethoxysil  
 ane-methyl methacrylate-3,4-epoxycyclohexylmethyl acrylate-Sumidur N 3500  
 copolymer **403500-06-1P**, Acrylic acid-butyl acrylate-glycidyl  
 methacrylate-2-hydroxyethyl methacrylate-methyl methacrylate copolymer  
 triethylamine salt 403500-07-2P, 2-Hydroxyethyl methacrylate-3-  
 methacryloxypropyltrimethoxysilane-methyl methacrylate-trifluoroethyl

methacrylate-Cyclomer A 200 copolymer 403500-08-3P, Butyl acrylate-butyl methacrylate-glycidyl methacrylate-methyl methacrylate-SZ 6030 graft copolymer 403500-10-7P, Butyl acrylate-butyl methacrylate-glycidyl methacrylate-3-glycidoxypropyltrimethoxysilane-2-hydroxyethyl methacrylate-3-methacryloxypropyltrimethoxysilane-methyl methacrylate-trifluoroethyl methacrylate-Cyclomer A 200 copolymer 403500-11-8P, Butyl acrylate-butyl methacrylate-glycidyl methacrylate-3-glycidoxypropyltrimethoxysilane-2-hydroxyethyl methacrylate-3-methacryloxypropyltrimethoxysilane-methyl methacrylate-trifluoroethyl methacrylate-phenyltrimethoxysilane-phenylmethyldimethoxysilane-Cyclomer A 200 copolymer 403500-12-9P, Butyl acrylate-butyl methacrylate-glycidyl methacrylate-2-hydroxyethyl methacrylate-3-methacryloxypropyltrimethoxysilane-methyl methacrylate-trifluoroethyl methacrylate-Cyclomer A 200 copolymer 403500-13-0P, Butyl acrylate-butyl methacrylate-3,4-epoxycyclohexylmethyl acrylate-glycidyl methacrylate-2-hydroxyethyl methacrylate-3-methacryloxypropyltrimethoxysilane-methyl methacrylate-trifluoroethyl methacrylate-Sumidur N 3500 copolymer

RL: **IMF (Industrial manufacture)**; POF (Polymer in formulation);  
TEM (Technical or engineered material use); **PREP (Preparation)**;  
USES (Uses)

(alkoxysilyl-containing and epoxy-containing acrylic resin-based low-temperature-curable coatings with good adhesion to various substrates)  
IT **403500-06-1P**, Acrylic acid-butyl acrylate-glycidyl methacrylate-2-hydroxyethyl methacrylate-methyl methacrylate copolymer triethylamine salt

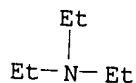
RL: **IMF (Industrial manufacture)**; POF (Polymer in formulation);  
TEM (Technical or engineered material use); **PREP (Preparation)**;  
USES (Uses)

(alkoxysilyl-containing and epoxy-containing acrylic resin-based low-temperature-curable coatings with good adhesion to various substrates)  
RN 403500-06-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with butyl 2-propenoate, methyl 2-methyl-2-propenoate, oxiranylmethyl 2-methyl-2-propenoate and 2-propenoic acid, compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8  
CMF C6 H15 N



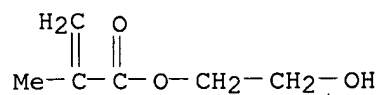
CM 2

CRN 69645-73-4  
CMF (C7 H12 O2 . C7 H10 O3 . C6 H10 O3 . C5 H8 O2 . C3 H4 O2)x  
CCI PMS

CM 3

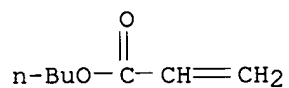
CRN 868-77-9

CMF C6 H10 O3



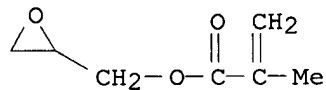
CM 4

CRN 141-32-2  
CMF C7 H12 O2



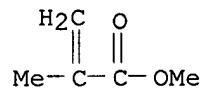
CM 5

CRN 106-91-2  
CMF C7 H10 O3



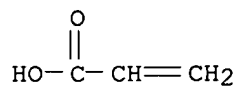
CM 6

CRN 80-62-6  
CMF C5 H8 O2



CM 7

CRN 79-10-7  
CMF C3 H4 O2

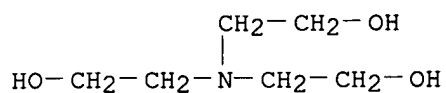


AN 2002:63622 HCAPLUS  
 DN 136:122323  
 TI Asphalt emulsification dispersant and its use in oil-in-water asphalt emulsion for paving  
 IN Iizuka, Masanori; Sasaki, Hirotaka; Tamaoki, Ryoichi; Honma, Yuichi  
 PA Kao Corp., Japan  
 SO Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002020626	A2	20020123	JP 2000-204688	20000706
PRAI	JP 2000-204688		20000706		
AB	The dispersant contains water-soluble copolymers comprising (a) vinyl monomers containing average 2-300 mol of C2-3 oxyalkylenes and (b) vinyl monomers containing CO <sub>2</sub> H, SO <sub>3</sub> H, amide, and/or their water-soluble salts. <b>Cement</b> and aggregates are mixed homogeneously with the emulsion using the dispersant, and pavement formed with the emulsion has high durability.				
IC	ICM C08L095-00 ICS C04B024-26; C04B026-26; C04B028-02; C08F290-06; C08K005-00; C04B024-36; C04B103-40				
CC	58-4 (Cement, Concrete, and Related Building Materials) Section cross-reference(s): 37				
IT	111740-39-7P, Methacrylic acid-polyethylene glycol methyl ether methacrylate graft copolymer 221881-27-2P, Methacrylic acid-polyethylene glycol methyl ether methacrylate graft copolymer sodium salt 221882-30-0P, Ethylene oxide-methacrylic acid graft copolymer methyl ether sodium salt 223122-81-4P, Ethylene oxide-methacrylic acid graft copolymer methyl ether 286007-97-4P, Maleic acid-polyethylene glycol allyl methyl ether graft copolymer 354137-33-0P, Ethylene oxide-methacrylic acid-propylene oxide graft copolymer methyl ether 359793-25-2P, Ethylene oxide-maleic acid graft copolymer methyl ether <b>374622-03-4P</b> 390417-45-5P <b>390745-31-0P</b> , Ethylene oxide-methacrylic acid graft copolymer methyl ether triethanolamine salt 390745-33-2P, Ethylene oxide-methacrylsulfonic acid-sodium methacrylate graft copolymer methyl ether RL: MOA (Modifier or additive use); PNU (Preparation, unclassified); PRP (Properties); TEM (Technical or engineered material use); <b>PREP (Preparation)</b> ; USES (Uses) (dispersant; water-soluble polymer dispersant for asphalt emulsification and its use in emulsion for paving)				
IT	<b>374622-03-4P 390745-31-0P</b> , Ethylene oxide-methacrylic acid graft copolymer methyl ether triethanolamine salt RL: MOA (Modifier or additive use); PNU (Preparation, unclassified); PRP (Properties); TEM (Technical or engineered material use); <b>PREP (Preparation)</b> ; USES (Uses) (dispersant; water-soluble polymer dispersant for asphalt emulsification and its use in emulsion for paving)				
RN	374622-03-4 HCAPLUS				
CN	2-Propenoic acid, 2-methyl-, polymer with $\alpha$ -(2-methyl-1-oxo-2-propenyl)- $\omega$ -methoxypoly(oxy-1,2-ethanediyl), graft, compd. with 2,2',2''-nitrilotris[ethanol] (9CI) (CA INDEX NAME)				

CM 1

CRN 102-71-6  
CMF C6 H15 N O3

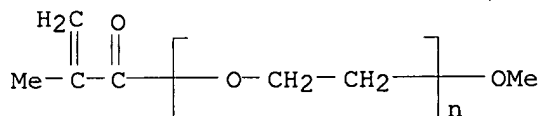


CM 2

CRN 111740-39-7  
CMF (C4 H6 O2 . (C2 H4 O)n C5 H8 O2)x  
CCI PMS

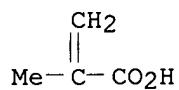
CM 3

CRN 26915-72-0  
CMF (C2 H4 O)n C5 H8 O2  
CCI PMS



CM 4

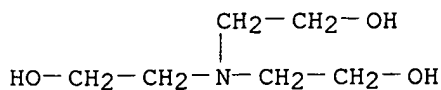
CRN 79-41-4  
CMF C4 H6 O2



RN 390745-31-0 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with oxirane, methyl ether, graft,  
compd. with 2,2',2''-nitrilotris[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 102-71-6  
CMF C6 H15 N O3



CM 2



CRN 223122-81-4  
CMF (C4 H6 O2 . C2 H4 O)x . x C H4 O

CM 3

CRN 67-56-1  
CMF C H4 O

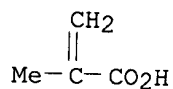
H<sub>3</sub>C-OH

CM 4

CRN 167763-01-1  
CMF (C4 H6 O2 . C2 H4 O)x  
CCI PMS

CM 5

CRN 79-41-4  
CMF C4 H6 O2



CM 6

CRN 75-21-8  
CMF C2 H4 O



L60 ANSWER 10 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN  
AN 2001:300791 HCAPLUS  
DN 134:312217  
TI Method for preparation of functional polymeric surface with improved  
adhesion and surface properties  
IN Bilyk, Alexander; Li, Sheng; Yang, Wei Dong; Hoobin, Pamela Maree;  
Russell, Lee Joy; Gutowski, Wojciech Stanislaw  
PA Commonwealth Scientific and Industrial Research Organisation, Australia  
SO PCT Int. Appl., 44 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI WO 2001029118 A1 20010426 WO 2000-AU1272 20001019  
 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,  
 CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,  
 HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,  
 LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,  
 SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,  
 YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,  
 DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,  
 CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  
 BR 2000014904 A 20020611 BR 2000-14904 20001019  
 EP 1242516 A1 20020925 EP 2000-971135 20001019  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL  
 JP 2003512490 T2 20030402 JP 2001-531910 20001019  
 US 2003194504 A1 20031016 US 2002-120252 20020411  
 PRAI AU 1999-3521 A 19991019  
 AU 1999-4905 A 19991230  
 AU 1999-9935 A 19991019  
 AU 1999-9949 A 19991230  
 WO 2000-AU1272 W 20001019

AB Title method for providing a crosslinked network grafted to the polymeric  
 substrate surface includes: (i) providing the polymeric surface with  
 functional groups; and (ii) contacting the surface with (a) a polyamine  
 compound reactive with the surface functional groups, wherein the polyamine  
 comprises  $\geq 4$  amine groups including  $\geq 2$  amine groups selected  
 from primary and secondary amine groups, and (b) a crosslinking agent  
 reactive with the polyamine. Thus a mineral filled automotive grade  
 polypropylene of Corton PDR 1054/2 HS Natural was flame treated with an  
 Aerogem FT Lab Model flame treatment unit and sprayed with a Lupasol  
 FC/glutaraldehyde formulation, then painted with a Heron White base coat  
 and a clear polyurethane top coat and cured, showing pull off strength  
 after 3 days at 80° 5.1 MPa and cohesive failure of the substrate  
 49%.

IC ICM C08J007-12

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 37, 42

IT **Polyamines**

RL: TEM (Technical or engineered material use); USES (Uses)  
 (method for preparation of functional polymeric surface with improved  
 adhesion and surface properties)

IT Coordination compounds

Halides

Oxides (inorganic), miscellaneous

**Polyoxyalkylenes**, miscellaneous

Polysaccharides, miscellaneous

RL: MSC (Miscellaneous)

(method for preparation of functional polymeric surface with improved  
 adhesion and surface properties with functional mols.)

IT 106400-60-6P, Acrylic acid-propylene graft **copolymer**  
 335259-44-4P, Allylamine-3-chloro-2-hydroxypropyl acrylate-propylene  
**copolymer** 335259-45-5P 335259-46-6P 335259-47-7P  
 335259-48-8P, Acrylic acid-allylamine-3-chloro-2-hydroxypropyl  
 acrylate-propylene **copolymer** 335277-16-2P,  
 Allylamine-3-chloro-2-hydroxypropyl acrylate-dextran glycidyl  
 acrylate-propylene **copolymer** 335277-17-3P, Dextran glycidyl  
 acrylate-propylene graft **copolymer** 335318-07-5P 335318-08-6P  
 335446-98-5P 335446-99-6P **335447-00-2P 335447-01-3P**

**335447-02-4P** 335447-03-5P 335447-04-6P 335447-05-7P

RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM  
(Technical or engineered material use); **PREP (Preparation)**; USES  
(Uses)

(method for preparation of functional polymeric surface with improved  
adhesion and surface properties)

IT **335447-00-2P 335447-01-3P 335447-02-4P**

RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM  
(Technical or engineered material use); **PREP (Preparation)**; USES  
(Uses)

(method for preparation of functional polymeric surface with improved  
adhesion and surface properties)

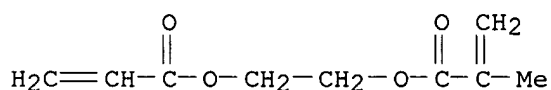
RN 335447-00-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-[(1-oxo-2-propenyl)oxy]ethyl ester, polymer  
with aziridine and 1-propene (9CI) (CA INDEX NAME)

CM 1

CRN 69040-48-8

CMF C9 H12 O4



CM 2

CRN 151-56-4

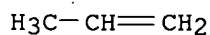
CMF C2 H5 N



CM 3

CRN 115-07-1

CMF C3 H6



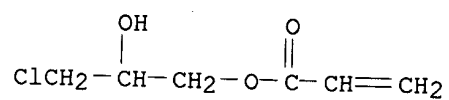
RN 335447-01-3 HCAPLUS

CN 2-Propenoic acid, 3-chloro-2-hydroxypropyl ester, polymer with aziridine  
and 1-propene (9CI) (CA INDEX NAME)

CM 1

CRN 3326-90-7

CMF C6 H9 Cl O3



CM 2

CRN 151-56-4

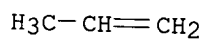
CMF C2 H5 N



CM 3

CRN 115-07-1

CMF C3 H6



RN 335447-02-4 HCAPLUS

CN 2-Propenoic acid, oxiranylmethyl ester, polymer with aziridine and 1-propene (9CI) (CA INDEX NAME)

CM 1

CRN 151-56-4

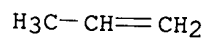
CMF C2 H5 N



CM 2

CRN 115-07-1

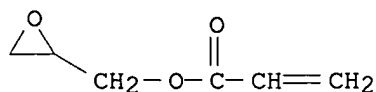
CMF C3 H6



CM 3

CRN 106-90-1

CMF C6 H8 O3



RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L60 ANSWER 11 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 2000:747064 HCAPLUS

DN 133:310786

TI High-concentration solutions of amino group-containing  
 $\alpha,\beta$ -unsaturated nitrile-conjugated diene rubber compositions  
with low viscosity and good storage stability

IN Koshimura, Katsuo; Tsuneyoshi, Minoru; Yamazaki, Takao

PA JSR Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000297182	A2	20001024	JP 1999-105801	19990413
PRAI	JP 1999-105801		19990413		
AB	The compns., useful as rubber <b>cements</b> for printing blankets, metal gasket coatings, friction materials, etc., contain amino group-containing $\alpha,\beta$ -unsatd. nitrile-conjugated diene rubbers [having $\alpha,\beta$ -unsatd. nitrile units 10-50, conjugated diene units 30-89.9, and CH <sub>2</sub> :CRCO <sub>2</sub> XNR <sub>1</sub> R <sub>2</sub> units (R = H, C1-4 alkyl; R <sub>1</sub> , R <sub>2</sub> = C1-8 hydrocarbyl; X = divalent linkage group) 0.1-20%] dissolved in polar solvents. Thus, 100 parts 60:30:10 butadiene-acrylonitrile-diethylaminoethyl methacrylate rubber was kneaded with 40 parts Nipsil VN 3 (wet silica) and other additives, vulcanized, and dissolved in PhMe [solubility parameter 8.9 (cal/cm <sup>3</sup> ) <sup>1/2</sup> ] to give a 30% rubber <b>cement</b> with viscosity change 5% after 7-day storage at 25°, which was press-cured to give a test piece with tensile strength 25.0 MPa and elongation at break 850%.				
IC	ICM C08L013-00				
	ICS C08F220-42; C08F236-04; C08J003-09; C08K003-04; C08K003-34; C08L009-02; C08L011-00; C08L033-18; C08F220-34				
CC	39-9 (Synthetic Elastomers and Natural Rubber)				
ST	rubber acrylonitrile butadiene ethylaminoethyl methacrylate soln; nitrile conjugated diene rubber silica reinforced; blanket gasket damper rubber soln low viscosity; <b>cement</b> rubber amino nitrile conjugated diene				
IT	<b>91277-34-8P</b> , Acrylonitrile-butadiene-diethylaminoethyl methacrylate copolymer				
	RL: <b>IMF (Industrial manufacture)</b> ; POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); <b>PREP (Preparation)</b> ; USES (Uses)				
	(rubber, vulcanized; solns. of amino group-containing $\alpha,\beta$ -unsatd. nitrile-conjugated diene rubber compns. with good storage stability)				
IT	<b>91277-34-8P</b> , Acrylonitrile-butadiene-diethylaminoethyl methacrylate copolymer				
	RL: <b>IMF (Industrial manufacture)</b> ; POF (Polymer in formulation);				

PRP (Properties); TEM (Technical or engineered material use); **PREP**  
**(Preparation)**; USES (Uses)

(rubber, vulcanized; solns. of amino group-containing  $\alpha,\beta$ -  
 unsatd. nitrile-conjugated diene rubber compns. with good storage  
 stability)

RN 91277-34-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(diethylamino)ethyl ester, polymer with  
 1,3-butadiene and 2-propenenitrile (9CI) (CA INDEX NAME)

CM 1

CRN 107-13-1

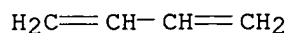
CMF C3 H3 N



CM 2

CRN 106-99-0

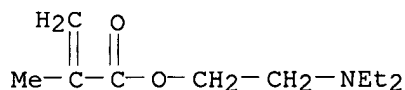
CMF C4 H6



CM 3

CRN 105-16-8

CMF C10 H19 N O2



L60 ANSWER 12 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 2000:742150 HCAPLUS

DN 133:310443

TI Aqueous superabsorbent polymer solution, its manufacture and use in  
 agricultural and consumer goods

IN Anderson, Stewart C.; Miller, Wayne P.

PA H.B. Fuller Licensing and Financing, Inc, USA

SO PCT Int. Appl., 23 pp.

CODEN: PIXXD2

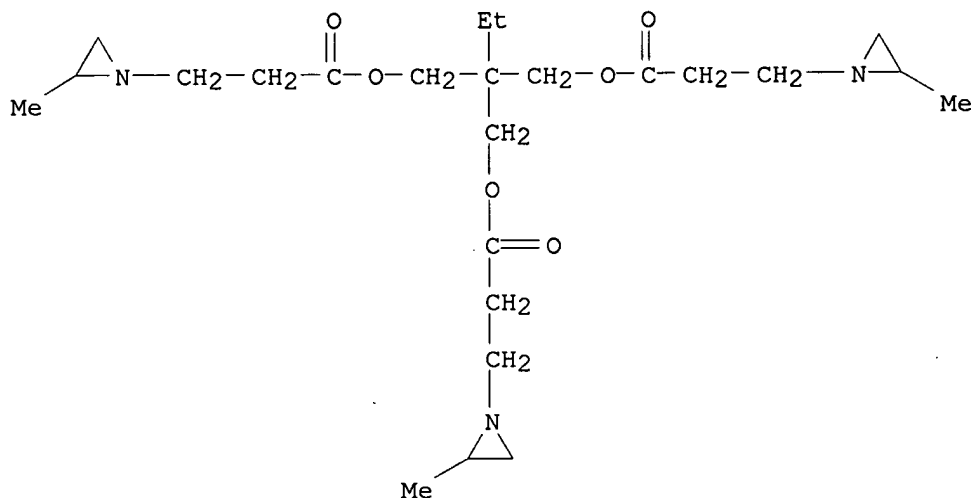
DT Patent

LA English

FAN.CNT 1

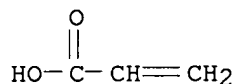
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000061642	A1	20001019	WO 2000-US10134	20000413
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,				

IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,  
MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,  
SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ,  
BY, KG, KZ, MD, RU, TJ, TM  
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,  
DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,  
CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  
EP 1224226 A1 20020724 EP 2000-923378 20000413  
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, LT, LV, FI, RO, MK, CY, AL  
PRAI US 1999-129145P P 19990414  
WO 2000-US10134 W 20000413  
AB A crosslinking aqueous solution (viscosity 50-20,000 cP) superabsorbent polymer  
(SAP) composition consists of .apprx.15-50%  $\geq$ 1 water-soluble monomer,  
preferably an  $\alpha,\beta$ -ethylenically unsatd. carboxylic acid monomer  
and a crosslinking agent. The polymer solution has low application  
viscosity, yet after crosslinking possesses a fast rate of acquisition and  
high absorption capacity. The SAP enhances the absorbency of various  
articles, increasing the humectancy and/or absorbency of a fiber or  
fibrous matrix, improving the H2O retention of soil and other agricultural  
methods, and increasing the open time of **cement**. Thus, Bacote  
20-crosslinked aqueous polyacrylic acid solution (viscosity 100-2000 cP) had  
water absorbency rating 9 (0 = worst, 10 = best).  
IC C08F008-00; A61L015-00  
CC 37-3 (Plastics Manufacture and Processing)  
ST **cement** additive superabsorbent polymer; fiber improved  
absorbency superabsorbent polymer; soil amendment superabsorbent polymer;  
diaper component superabsorbent polymer; crosslinked polyacrylate  
superabsorbent  
IT **109665-04-5P**, Acrylic acid-Neocryl CX 100 copolymer  
302543-59-5P, Acrylic acid-Bacote 20 copolymer  
RL: **IMF (Industrial manufacture)**; TEM (Technical or engineered  
material use); **PREP (Preparation)**; USES (Uses)  
(aqueous superabsorbent polymer solution for use in agricultural and  
consumer  
goods)  
IT **109665-04-5P**, Acrylic acid-Neocryl CX 100 copolymer  
RL: **IMF (Industrial manufacture)**; TEM (Technical or engineered  
material use); **PREP (Preparation)**; USES (Uses)  
(aqueous superabsorbent polymer solution for use in agricultural and  
consumer  
goods)  
RN 109665-04-5 HCAPLUS  
CN 1-Aziridinepropanoic acid, 2-methyl-, 2-ethyl-2-[[3-(2-methyl-1-  
aziridinyl)-1-oxopropoxy]methyl]-1,3-propanediyl ester, polymer with  
2-propenoic acid (9CI) (CA INDEX NAME)  
CM 1  
CRN 64265-57-2  
CMF C24 H41 N3 O6



CM 2

CRN 79-10-7  
CMF C3 H4 O2



RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L60 ANSWER 13 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN  
AN 2000:686296 HCAPLUS  
DN 133:267265  
TI Water-soluble or water-dispersible polymer salts and their use in cosmetic  
and pharmaceutical formulations  
IN Nguyen, Kim Son; Sanner, Axel; Hossel, Peter  
PA BASF Aktiengesellschaft, Germany  
SO Eur. Pat. Appl., 31 pp.  
CODEN: EPXXDW  
DT Patent  
LA German  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1038891	A2	20000927	EP 2000-106470	20000324
	EP 1038891	A3	20010801		
	EP 1038891	B1	20030122		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	DE 19913875	A1	20000928	DE 1999-19913875	19990326
	US 6407158	B1	20020618	US 2000-531469	20000320
	JP 2000302837	A2	20001031	JP 2000-82459	20000323
	AT 231525	E	20030215	AT 2000-106470	20000324



ES 2191580	T3	20030916	ES 2000-106470	20000324
CN 1269377	A	20001011	CN 2000-104817	20000327
PRAI DE 1999-19913875	A	19990326		

- AB The salts, especially useful in hair sprays, consist of a polymer with free amino or acid groups and, resp., compds. with  $\geq 2$  acid (or a polybasic inorg. acid) or amino groups, where the latter compound also contains a hydrophilic group. Thus, a polyester diol (from adipic acid, 1,6-hexanediol, and isophthalic acid) 1.0, neopentyl glycol 1.2, dimethylolpropionic acid 2.7, and IPDI 5.0 mol were polymerized to give a carboxy group-containing polyurethane, which was neutralized with N-methyldipropylenetriamine.
- IC ICM C08F220-00
- CC 35-8 (Chemistry of Synthetic High Polymers)  
Section cross-reference(s): 62, 63
- IT Polysiloxanes, properties  
RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)  
(polyamine-polyoxyalkylene-, block; water-soluble or water-dispersible polymer salts for use in cosmetic and pharmaceutical formulations)
- IT Polyoxoalkylenes, properties  
RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)  
(polyamine-polysiloxane-, block; water-soluble or water-dispersible polymer salts for use in cosmetic and pharmaceutical formulations)
- IT Polyurethanes, preparation  
RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); PRP (Properties); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(polyester-, block, carboxy-containing, salts with polyamines; water-soluble or water-dispersible polymer salts for use in cosmetic and pharmaceutical formulations)
- IT Polyurethanes, preparation  
RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); PRP (Properties); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(polyoxyalkylene-, block, amino-containing, salts with polybasic acids; water-soluble or water-dispersible polymer salts for use in cosmetic and pharmaceutical formulations)
- IT Polysiloxanes, properties  
Polysiloxanes, properties  
RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)  
(polyoxyalkylene-, graft, amino group-containing; water-soluble or water-dispersible polymer salts for use in cosmetic and pharmaceutical formulations)
- IT Polyamines  
RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)  
(polyoxyalkylene-polysiloxane-, block; water-soluble or water-dispersible polymer salts for use in cosmetic and pharmaceutical formulations)
- IT Polyoxoalkylenes, properties  
Polyoxoalkylenes, properties  
RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)  
(polysiloxane-, graft, amino group-containing; water-soluble or water-dispersible polymer salts for use in cosmetic and pharmaceutical formulations)

IT 154838-98-9DP, Butyl acrylate-tert-butyl acrylate-methacrylic acid **copolymer**, compound with Dinoramox S 7 292621-96-6DP, Adipic acid-dimethylolpropionic acid-1,6-hexanediol-IPDI-isophthalic acid-neopentyl glycol block **copolymer**, compound with Dinoramox S 7 297168-78-6P, Adipic acid-dimethylolpropionic acid-1,6-hexanediol-IPDI-isophthalic acid-neopentyl glycol block **copolymer** N-methyldipropylenetriamine salt 297168-79-7P 297168-81-1P 297168-82-2P **297168-83-3P**, Butyl acrylate-tert-butyl acrylate-methacrylic acid **copolymer** N-methyldipropylenetriamine salt **297168-84-4P** 297168-85-5P 297168-86-6P 297168-88-8P 297168-90-2P  
 RL: BUU (Biological use, unclassified); **IMF (Industrial manufacture)**; PRP (Properties); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)  
 (water-soluble or water-dispersible polymer salts for use in cosmetic and pharmaceutical formulations)

IT **297168-83-3P**, Butyl acrylate-tert-butyl acrylate-methacrylic acid **copolymer** N-methyldipropylenetriamine salt **297168-84-4P**  
 RL: BUU (Biological use, unclassified); **IMF (Industrial manufacture)**; PRP (Properties); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)  
 (water-soluble or water-dispersible polymer salts for use in cosmetic and pharmaceutical formulations)

RN 297168-83-3 HCAPLUS

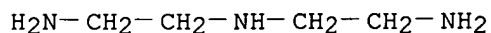
CN 2-Propenoic acid, 2-methyl-, polymer with butyl 2-propenoate and 1,1-dimethylethyl 2-propenoate, compd. with N-(2-aminomethylethyl)-1,2-propanediamine N-methyl deriv. (9CI) (CA INDEX NAME)

CM 1

CRN 11071-12-8

CMF C7 H19 N3

CCI IDS



3 ( D1-Me )

CM 2

CRN 154838-98-9

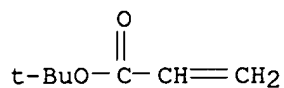
CMF (C7 H12 O2 . C7 H12 O2 . C4 H6 O2)x

CCI PMS

CM 3

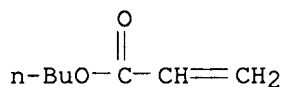
CRN 1663-39-4

CMF C7 H12 O2



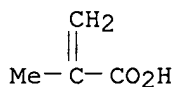
CM 4

CRN 141-32-2  
CMF C7 H12 O2



CM 5

CRN 79-41-4  
CMF C4 H6 O2

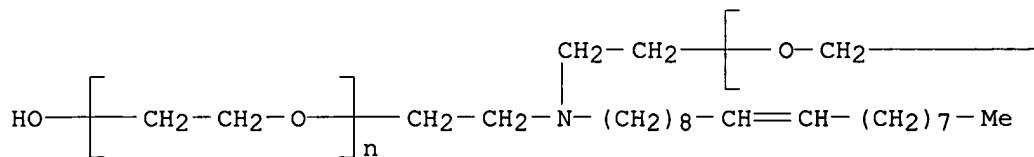


RN 297168-84-4 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with butyl 2-propenoate and 1,1-dimethylethyl 2-propenoate, compd. with  $\alpha,\alpha'$ -[[ (9Z)-9-octadecenylimino]di-2,1-ethanediyl]bis[ $\omega$ -hydroxypoly(oxy-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

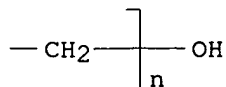
CM 1

CRN 26635-93-8  
CMF (C2 H4 O)n (C2 H4 O)n C22 H45 N O2  
CCI PMS

PAGE 1-A



PAGE 1-B

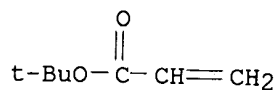


CM 2

CRN 154838-98-9  
CMF (C7 H12 O2 . C7 H12 O2 . C4 H6 O2)x  
CCI PMS

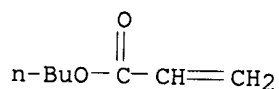
CM 3

CRN 1663-39-4  
CMF C7 H12 O2



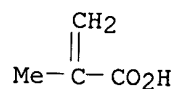
CM 4

CRN 141-32-2  
CMF C7 H12 O2



CM 5

CRN 79-41-4  
CMF C4 H6 O2



L60 ANSWER 14 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN  
AN 2000:631920 HCAPLUS  
DN 133:209050  
TI Manufacture of crosslinked polyurethane foams for automobile parts with  
excellent mechanical properties  
IN Watanabe, Hiroyuki; Satake, Shuichi  
PA Sanyo Chemical Industries, Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 17 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI JP 2000248033 A2 20000912 JP 1999-375723 19991228  
 PRAI JP 1998-377241 A 19981229

AB The foams, useful for shock absorbers, steering wheels, seat cushions, and headrests, are manufactured by reaction of addition polymerizable active H compds.

and organic polyisocyanates in the presence of polymerization initiators (containing peroxides, transition metal compds., and chelating agents and/or reducing agents) and optionally other additives. Thus, a composition containing 100 parts

glycerin dimethacrylate, 172.7 parts cruder MDI, disodium EDTA, Fyrol CEF (P-type fireproofing agent), Rongalit, and Percumyl H (cumene hydroperoxide) was molded into foams with compression strength 2.2 kg/cm<sup>2</sup>, thermal conductivity 0.0230 kcal/mh-°C, and good fire resistance.

IC ICM C08G018-09  
 ICS C08G018-22; C08G018-09; C08G101-00

CC 38-3 (Plastics Fabrication and Uses)

IT Polyurethanes, uses

Polyurethanes, uses

Polyurethanes, uses

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(acrylic-**polyamine-polyoxyalkylene**-; manufacture of crosslinked polyurethane foams for automobile parts with good mech. properties)

IT **Polyoxyalkylenes**, uses

**Polyoxyalkylenes**, uses

**Polyoxyalkylenes**, uses

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(acrylic-**polyamine**-polyurethane-; manufacture of crosslinked polyurethane foams for automobile parts with good mech. properties)

IT **Polyamines**

**Polyamines**

**Polyamines**

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(acrylic-**polyoxyalkylene**-polyurethane-; manufacture of crosslinked polyurethane foams for automobile parts with good mech. properties)

IT Polyurethanes, uses

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(**polyoxyalkylene**-, acrylic; manufacture of crosslinked polyurethane foams for automobile parts with good mech. properties)

IT 101-68-8DP, MDI, urethane-modified, reaction products with glycerin monomethacrylate and **polyoxyalkylene** 50853-28-6DP, Glycerin monomethacrylate, reaction products with **polyoxyalkylene** and urethane-modified MDI 107498-00-0DP, Ethylene oxide-propylene oxide block **copolymer** glycerin ether, reaction products with glycerin monomethacrylate and urethane-modified MDI 139385-69-6P, Crude MDI-glycerin dimethacrylate **copolymer** 289705-87-9P, Crude MDI-ethylene oxide-propylene oxide block **copolymer** glycerin ether-glycerin monomethacrylate-TDI **copolymer** 289705-88-0P, Crude MDI-diethylene glycol monoacrylate-ethylene

oxide-propylene oxide block **copolymer** glycerin  
ether-triethanolamine **copolymer**

RL: **IMF (Industrial manufacture)**; POF (Polymer in formulation);  
PRP (Properties); TEM (Technical or engineered material use); **PREP**  
(Preparation); USES (Uses)

(manufacture of crosslinked polyurethane foams for automobile parts with  
good mech. properties)

IT 289705-88-0P, Crude MDI-diethylene glycol monoacrylate-ethylene  
oxide-propylene oxide block **copolymer** glycerin  
ether-triethanolamine **copolymer**

RL: **IMF (Industrial manufacture)**; POF (Polymer in formulation);  
PRP (Properties); TEM (Technical or engineered material use); **PREP**  
(Preparation); USES (Uses)

(manufacture of crosslinked polyurethane foams for automobile parts with  
good mech. properties)

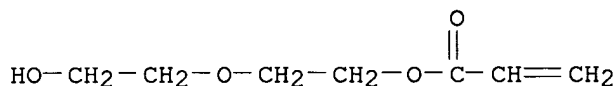
RN 289705-88-0 HCAPLUS

CN 2-Propenoic acid, 2-(2-hydroxyethoxy)ethyl ester, polymer with  
methyloxirane block polymer with oxirane ether with 1,2,3-propanetriol  
(3:1), 2,2',2''-nitrilotris[ethanol] and polymethylenepolyphenylene  
isocyanate (9CI) (CA INDEX NAME)

CM 1

CRN 13533-05-6

CMF C7 H12 O4



CM 2

CRN 9016-87-9

CMF Unspecified

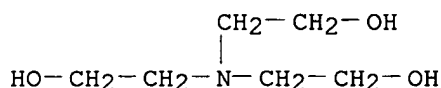
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 3

CRN 102-71-6

CMF C6 H15 N O3



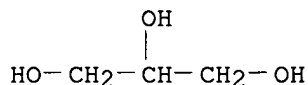
CM 4

CRN 107498-00-0

CMF C3 H8 O3 . 3 (C3 H6 O . C2 H4 O)x

CM 5

CRN 56-81-5  
CMF C3 H8 O3

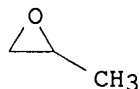


CM 6

CRN 106392-12-5  
CMF (C3 H6 O . C2 H4 O)x  
CCI PMS

CM 7

CRN 75-56-9  
CMF C3 H6 O



CM 8

CRN 75-21-8  
CMF C2 H4 O



L60 ANSWER 15 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN  
AN 2000:181937 HCAPLUS  
DN 133:22373  
TI Synthesis and NMR characterization of methacrylate copolymers with potential uses as bone **cements**  
AU Martinez-Richa, Antonio; Cauich-Rodriguez, Juan V.; Vera-Graziano, Ricardo  
CS Facultad de Quimica, Universidad de Guanajuato, Guanajuato, 36050, Mex.  
SO Polymeric Materials Science and Engineering (2000), 82, 17-18  
CODEN: PMSEDG; ISSN: 0743-0515  
PB American Chemical Society  
DT Journal  
LA English  
AB Methacrylate copolymers which are compatible with hydroxylapatite and have potential applications as bone **cements** were prepared and characterized. Stereochem. structure, comonomer-sequence and end groups were assigned.  
CC 63-7 (Pharmaceuticals)

Section cross-reference(s): 36, 37

ST methacrylate copolymer NMR bone **cement** prepn

IT Medical goods

(bone **cements**; preparation and NMR characterization and tacticity of methacrylate copolymers for bone **cements**)

IT NMR spectroscopy

Tacticity

(preparation and NMR characterization and tacticity of methacrylate copolymers for bone **cements**)

IT 9011-14-7P, Poly(methyl methacrylate) 25685-29-4P, Ethyl

methacrylate-methyl methacrylate copolymer **141699-08-3P**,

Diethylaminoethyl methacrylate-ethyl methacrylate-methyl methacrylate copolymer

RL: PRP (Properties); **SPN (Synthetic preparation)**; THU

(Therapeutic use); BIOL (Biological study); **PREP (Preparation)**;

USES (Uses)

(preparation and NMR characterization and tacticity of methacrylate copolymers for bone **cements**)

IT **141699-08-3P**, Diethylaminoethyl methacrylate-ethyl

methacrylate-methyl methacrylate copolymer

RL: PRP (Properties); **SPN (Synthetic preparation)**; THU

(Therapeutic use); BIOL (Biological study); **PREP (Preparation)**;

USES (Uses)

(preparation and NMR characterization and tacticity of methacrylate copolymers for bone **cements**)

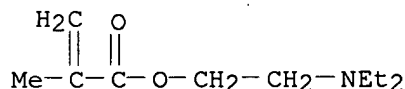
RN 141699-08-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(diethylamino)ethyl ester, polymer with ethyl 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 105-16-8

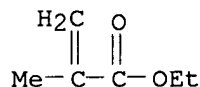
CMF C10 H19 N O2



CM 2

CRN 97-63-2

CMF C6 H10 O2

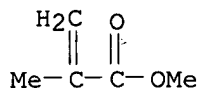


CM 3

CRN 80-62-6

CMF C5 H8 O2





RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L60 ANSWER 16 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1999:751670 HCAPLUS

DN 132:3912

TI Resin vehicles for asphalt emulsions and asphalt compositions therewith  
for ambient-temperature blending

IN Endo, Toshio; Isobe, Tomohisa; Iwamoto, Naohisa

PA Daicel Chemical Industries, Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11323140	A2	19991126	JP 1999-60097	19990308
PRAI	JP 1998-73257		19980306		

AB The vehicles comprise (A) H<sub>2</sub>O-soluble epoxy resins having ≥2 epoxy groups in a mol. and epoxy equivalent 100-2000 and/or their (meth)acrylates, (B) flexible epoxy resins, and (C) aliphatic polyamines, aromatic polyamines, alicyclic polyamines, polyamide-amines, and/or their modified products in their weight ratio of A:B = 5-100:95-0 and equivalent ratio of (A + B):C = 100:50-200. Thus, a composition of a 60% asphalt emulsion 3.00, Denacol EX 512 (polyglycerol polyglycidyl ether; epoxy equivalent 167) 3.00, diethylenetriamine 0.30, melaminesulfonic acid-type water reducing agent 1.20, and aggregate 100 parts showed improved strength, durability, and water resistance.

IC ICM C08L095-00

ICS C08G059-50; C09J195-00

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 51, 58

IT **Cement** (construction material)

Paving materials

Water-resistant materials

(ambient-temperature-curable water-soluble epoxy resin vehicles for asphalt emulsions)

IT 133842-79-2P, Denacol EX 830-diethylenetriamine copolymer 193896-29-6P, Denacol EX 512-diethylenetriamine copolymer **250691-69-1P**, Denacol EX 830 acrylate-diethylenetriamine copolymer 250708-70-4P, Denacol EX 512-diethylenetriamine-Epikote 871 copolymer 250708-71-5P, Denacol EX 512-Denacol EX 931-diethylenetriamine copolymer **250708-74-8P**, Denacol EX 512 acrylate-diethylenetriamine copolymer 250708-75-9P, Denacol EX 512-diethylenetriamine-ethylenediamine copolymer 250708-76-0P, Denacol EX 512-hexamethylenediamine copolymer 250708-77-1P, Denacol EX 512-diaminodiphenylmethane copolymer 250708-78-2P, Denacol EX 512-EH 651 copolymer 250708-79-3P, Denacol EX 512-Laromin C copolymer 250708-80-6P, Denacol EX 512-Versamid 140 copolymer 251297-80-0P, Bisphenol A diglycidyl ether-Denacol EX 512-diethylenetriamine copolymer 251297-81-1P, N-Aminoethylpiperazine-

Denacol EX 512-piperazine-triethanolamine copolymer

RL: **IMF (Industrial manufacture)**; MOA (Modifier or additive use); PRP (Properties); **PREP (Preparation)**; USES (Uses)

(ambient-temperature-curable water-soluble epoxy resin vehicles for asphalt emulsions)

IT **250691-69-1P**, Denacol EX 830 acrylate-diethylenetriamine copolymer

**250708-74-8P**, Denacol EX 512 acrylate-diethylenetriamine copolymer

RL: **IMF (Industrial manufacture)**; MOA (Modifier or additive use); PRP (Properties); **PREP (Preparation)**; USES (Uses)

(ambient-temperature-curable water-soluble epoxy resin vehicles for asphalt emulsions)

RN 250691-69-1 HCAPLUS

CN 1,2-Ethanediamine, N-(2-aminoethyl)-, polymer with  $\alpha$ -(oxiranylmethyl)- $\omega$ -(oxiranylmethoxy)poly(oxy-1,2-ethanediyl) homopolymer 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 111-40-0

CMF C4 H13 N3



CM 2

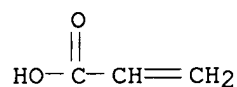
CRN 104220-34-0

CMF C3 H4 O2 . x ((C2 H4 O)n C6 H10 O3)x

CM 3

CRN 79-10-7

CMF C3 H4 O2



CM 4

CRN 58782-18-6

CMF ((C2 H4 O)n C6 H10 O3)x

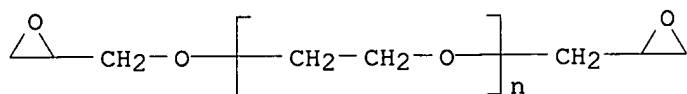
CCI PMS

CM 5

CRN 26403-72-5

CMF (C2 H4 O)n C6 H10 O3

CCI PMS



RN 250708-74-8 HCAPLUS

Tetraglycerol, tetrakis(oxiranylmethyl) ether, homopolymer, 2-propenoate, polymer with N-(2-aminoethyl)-1,2-ethanediamine (9CI) (CA INDEX NAME)

CM 1

CRN 111-40-0

CMF C4 H13 N3



CM 2

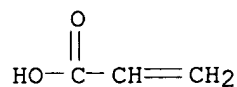
CRN 250708-73-7

CMF (C24 H42 O13) x . x C3 H4 O2

CM 3

CRN 79-10-7

CMF C3 H4 O2



CM 4

CRN 105521-63-9

CMF (C24 H42 O13) x

CCI PMS

CM 5

CRN 112477-66-4

CMF C24 H42 O13

CCI    IDS

CM 6

CRN 56491-53-3

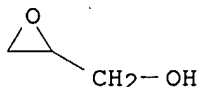
CMF C12 H26 O9

CCI IDS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 7

CRN 556-52-5  
CMF C3 H6 O2



L60 ANSWER 17 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1999:705021 HCAPLUS

DN 131:323408

TI Formaldehyde-free, accelerated cure, aqueous composition for bonding heat-resistant nonwoven glass fibers

IN Arkens, Charles Thomas; Egolf, Scott Lind

PA Rohm and Haas Company, USA

SO U.S., 8 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5977232	A	19991102	US 1997-904713	19970801
PRAI	US 1997-904713		19970801		

AB A formaldehyde-free curable aqueous composition comprises (a) a polyacid comprising

at least two carboxylic acid groups, anhydride groups, or salts thereof; (b) an active hydrogen compound containing at least two active hydrogen groups selected from hydroxyl, primary amino, secondary amino, and mixts. thereof; and (c) a fluoroborate accelerator; and (d) a phosphorus-containing accelerator, where the ratio of the number of equivalent of carboxylic acid groups, anhydride groups, or salts thereof to the number of equivalent of hydroxyl groups is 1:0.01-3, and the carboxylic acid groups, anhydride groups, or salts thereof are <35% neutralized with a fixed base. A method for curing formaldehyde-free polyacids and a method for bonding glass fiber heat-resistant nonwovens with a formaldehyde-free binder are further disclosed. The nonwovens are useful in insulation batts, reinforcing mat for roofing or flooring, battery separators, etc. (no data). Thus, a cured nonwoven sheet containing a composition comprising poly(acrylic acid)

50.11, triethanolamine 7.07, sodium hypophosphite (I) 0.18, sodium fluoroborate (II) 0.15, Z 6040 14.92, and water 227.54 g showed dry tensile strength 9.7 lb/in., wet tensile strength 7.3 lb/in, and retention (W/D x 100) 75.3%, compared with 10.6, 2.6, and 24.5, resp., without II, and 10.3, 5.5, and 53.4, resp., without I.

IC ICM C08K003-38

ICS C08K003-16

NCL 524404000

CC 37-6 (Plastics Manufacture and Processing)

ST **polycarboxylic** acid compn curing formaldehyde free; polyacrylic acid curing formaldehyde free; fluoroborate accelerator curing **polycarboxylic** acid compn; phosphorus accelerator curing **polycarboxylic** acid compn; sodium hypophosphite curing accelerator **polycarboxylic** acid; glass fiber nonwoven bonding formaldehyde free

IT 52880-57-6P, Poly(acrylic acid) triethanolamine salt  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (formaldehyde-free, accelerated cure, aqueous composition for bonding heat-resistant nonwoven glass fibers)

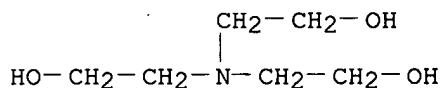
IT 52880-57-6P, Poly(acrylic acid) triethanolamine salt  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (formaldehyde-free, accelerated cure, aqueous composition for bonding heat-resistant nonwoven glass fibers)

RN 52880-57-6 HCAPLUS

CN 2-Propenoic acid, homopolymer, compd. with 2,2',2''-nitrilotris[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 102-71-6  
 CMF C6 H15 N O3

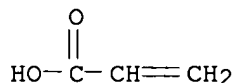


CM 2

CRN 9003-01-4  
 CMF (C3 H4 O2)x  
 CCI PMS

CM 3

CRN 79-10-7  
 CMF C3 H4 O2



RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L60 ANSWER 18 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN  
 AN 1999:629948 HCAPLUS  
 DN 131:258429

TI Graft copolymers, their manufacture from polyalkylenimines, alkylene oxides, and unsaturated monomers, and their use as cement additives, scale inhibitors, and detergent compositions

IN Maita, Takeshi; Tanaka, Hiromichi; Nagare, Koichiro

PA Nippon Shokubai Kagaku Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 12 pp.  
 CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11269239	A2	19991005	JP 1998-70695	19980319
PRAI	JP 1998-70695		19980319		

AB Graft polymers are manufactured by addition polymerization of polyalkylenimines with excess alkylene oxides (based on the active H-containing amino groups) to prepare polyamine-polyethers, followed by solventless graft polymerization with unsatd. monomers at 80-160° in the presence of organic peroxides. The graft polymers are used as additives for **cement** compns., scale inhibitors, and detergent compns. Thus, 194 g polyethylenimine polyethylene oxide adduct reacted with 14.0 g maleic acid and 20.2 g acrylic acid at 130° for 2 h to give an aqueous solution of a graft **copolymer** with Mn 4800 and Mw 16,000, which improved dispersion stability of portland **cements**, scale inhibition of Ca phosphate and Zn(OH)<sub>2</sub> to glass containers, and detergency of surfactant-containing detergent compns.

IC ICM C08F283-06  
ICS C02F005-10; C04B024-26; C09K003-00; C11D003-37; C04B103-40

CC 37-6 (Plastics Manufacture and Processing)  
Section cross-reference(s): 46, 58

ST polyalkylenimine polyoxyethylene unsatd monomer graft **copolymer**; **cement** dispersant polyalkylenimine polyoxyalkylene acrylic graft **copolymer**; scale inhibitor graft acrylic polyethylenimine polyoxyethylene; detergent graft acrylic polyethylenimine ethylene oxide adduct

IT Dispersing agents  
(for **cements**; manufacture of graft **copolymers** from polyalkylenimines, alkylene oxides, and unsatd. monomers for use as **cement** additives, scale inhibitors, and detergent compns.)

IT Polymerization  
(graft; manufacture of graft **copolymers** from polyalkylenimines, alkylene oxides, and unsatd. monomers for use as **cement** additives, scale inhibitors, and detergent compns.)

IT Detergents  
Scale inhibitors  
(manufacture of graft **copolymers** from polyalkylenimines, alkylene oxides, and unsatd. monomers for use as **cement** additives, scale inhibitors, and detergent compns.)

IT **Polyoxyalkylenes**, preparation  
**Polyoxyalkylenes**, preparation  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(**polyamine**-, acrylic, graft; manufacture of graft **copolymers** from polyalkylenimines, alkylene oxides, and unsatd. monomers for use as **cement** additives, scale inhibitors, and detergent compns.)

IT **Polyamines**  
**Polyamines**  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(**polyoxyalkylene**-, acrylic, graft; manufacture of graft **copolymers** from polyalkylenimines, alkylene oxides, and unsatd. monomers for use as **cement** additives, scale inhibitors, and detergent compns.)

- IT **Cement** (construction material)  
(portland; manufacture of graft **copolymers** from polyalkylenimines, alkylene oxides, and unsatd. monomers for use as **cement** additives, scale inhibitors, and detergent compns.)
- IT **245053-05-8P**, Acrylic acid-ethylene oxide-ethylenimine-maleic acid graft **copolymer**  
RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(manufacture of graft **copolymers** from polyalkylenimines, alkylene oxides, and unsatd. monomers for use as **cement** additives, scale inhibitors, and detergent compns.)
- IT 10103-46-5, Calcium phosphate 20427-58-1, Zinc hydroxide  
RL: MSC (Miscellaneous)  
(scale inhibitor for; manufacture of graft **copolymers** from polyalkylenimines, alkylene oxides, and unsatd. monomers for use as **cement** additives, scale inhibitors, and detergent compns.)
- IT 98-11-3D, Benzenesulfonic acid, C12-16 alkyl derivs., sodium salts, uses 7664-93-9D, Sulfuric acid, higher alkyl esters, Na salts, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(surfactant in detergents; manufacture of graft **copolymers** from polyalkylenimines, alkylene oxides, and unsatd. monomers for use as **cement** additives, scale inhibitors, and detergent compns.)
- IT **245053-05-8P**, Acrylic acid-ethylene oxide-ethylenimine-maleic acid graft **copolymer**  
RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(manufacture of graft **copolymers** from polyalkylenimines, alkylene oxides, and unsatd. monomers for use as **cement** additives, scale inhibitors, and detergent compns.)
- RN 245053-05-8 HCAPLUS
- CN 2-Butenediöic acid (2Z)-, polymer with aziridine, oxirane and 2-propenoic acid, graft (9CI) (CA INDEX NAME)

CM 1

CRN 151-56-4

CMF C2 H5 N

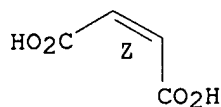


CM 2

CRN 110-16-7

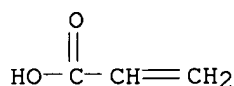
CMF C4 H4 O4

Double bond geometry as shown.



CM 3

CRN 79-10-7  
CMF C3 H4 O2



CM 4

CRN 75-21-8  
CMF C2 H4 O



L60 ANSWER 19 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1999:380817 HCAPLUS

DN 131:46270

TI Treatment for improving the surface strength and printability of paper

IN Taniguchi, Masahide; Takeuchi, Kunio; Ohwatari, Junya

PA Seiko Kagaku Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11158800	A2	19990615	JP 1997-364263	19971127
PRAI	JP 1997-364263		19971127		

AB The treatment is obtained from a mixture of (A) polyamide-polyamine-epichlorohydrin adducts, (B) (meth)acrylamide-based polymers and (C) polyalkylene glycols. Thus, heating diethylenetriamine 101 with adipic acid 146 in water 55 g at 170-180° while removing water for 4 h, then mixing the resulting polyaminamide with 138.9 g epichlorohydrin and 1530 g water and heating at 60-65° for 3 h gave an adduct. A paper surface treatment was obtained from the adduct, a copolymer of acrylamide and acrylic acid and a polyethylene glycol.

IC ICM D21H027-00  
ICS D21H019-16

CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)

ST polyaminamide epichlorohydrin adduct paper surface treatment;



polyalkylenepolyamine **polycarboxylic** acid amide paper surface treatment; polyalkylene glycol paper surface treatment; size surface paper polyaminamide epichlorohydrin adduct compn

IT 25212-19-5P, Adipic acid-diethylenetriamine-epichlorohydrin copolymer  
**227011-77-0P**, Adipic acid-diethylenetriamine-epichlorohydrin-itaconic acid copolymer 227011-78-1P, Adipic acid-diethylenetriamine-epichlorohydrin-glycerin triglycidyl ether copolymer

RL: **IMF (Industrial manufacture)**; POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(surface treatment; compns. containing acrylamide based polymers for improving surface strength and printability of paper)

IT **227011-77-0P**, Adipic acid-diethylenetriamine-epichlorohydrin-itaconic acid copolymer

RL: **IMF (Industrial manufacture)**; POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(surface treatment; compns. containing acrylamide based polymers for improving surface strength and printability of paper)

RN 227011-77-0 HCAPLUS

CN Hexanedioic acid, polymer with N-(2-aminoethyl)-1,2-ethanediamine, (chloromethyl)oxirane and methylenebutanedioic acid (9CI) (CA INDEX NAME)

CM 1

CRN 124-04-9  
 CMF C6 H10 O4

HO<sub>2</sub>C-(CH<sub>2</sub>)<sub>4</sub>-CO<sub>2</sub>H

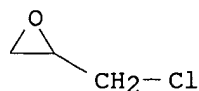
CM 2

CRN 111-40-0  
 CMF C4 H13 N3

H<sub>2</sub>N-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-NH<sub>2</sub>

CM 3

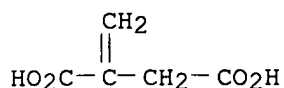
CRN 106-89-8  
 CMF C3 H5 Cl O



CM 4

CRN 97-65-4

CMF C5 H6 O4



L60 ANSWER 20 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1999:311270 HCAPLUS

DN 130:339501

TI Printing ink compositions containing core-shell binders and additives for image film having superior smear-fastness

IN Nguyen, Khe C.; Ganapathiappan, Sivapackia

PA Hewlett-Packard Company, USA

SO PCT Int. Appl., 70 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 8

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9923183	A1	19990514	WO 1998-US23474	19981029
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 5990202	A	19991123	US 1997-998164	19971224
US 6417249	B1	20020709	US 1998-138772	19980824
AU 9913796	A1	19990524	AU 1999-13796	19981029
EP 1027393	A1	20000816	EP 1998-957567	19981029
R: DE, FR, GB, IT				
JP 2001521977	T2	20011113	JP 2000-519048	19981029
PRAI US 1997-962496	A	19971031		
US 1997-998164	A	19971224		
US 1998-138772	A	19980824		
WO 1998-US23474	W	19981029		

OS MARPAT 130:339501

AB Core/shell binders such as [AmBnC'p]x are prepared, where A and B are hydrophobic components in which A exhibits a glass transition temperature Tg -150° to 25° and B exhibits a Tg >25°, C' forms a hydrophilic or water-soluble component and has an ionic or nonionic structure, m <30%, n >40%, and p <30%, m + n + p = 100%, and x = 1-100,000, and the weight-average mol. weight .apprx.1000-2,000,000. The binder

polymer is used in conjunction with additives comprising either (a) amine alcs. R1R2N(RX)OH (R1, R2 = H, alkyl, alkoxy, aryl, and phenoxy, R = alkyl, X = H, alkyl, aryl, OH, CO2H, CHO, and substituted groups) or (b) organic acids (water-soluble or water-dispersive), including polymeric acids, optionally amines, polyalcs., polyamines, and polyesters, and the binder/colorant ratio ≥10. Thus, hexyl acrylate-Me methacrylate-polyethylene glycol Me ether acrylate **copolymer** emulsion, Et acetate (0.05%), and water was cast on glass and dried as a

test film having Tg -10°.

IC ICM C09D011-00

CC 42-12 (Coatings, Inks, and Related Products)

IT **Polyoxyalkylenes**, uses

RL: MOA (Modifier or additive use); USES (Uses)

(printing ink compns. containing colorant, core-shell binders and additives for image film having superior smear-fastness and water fastness)

IT Amines, uses

Carboxylic acids, uses

Esters, uses

**Polyamines**

RL: MOA (Modifier or additive use); USES (Uses)

(printing ink compns. containing core-shell binders and additives for image film having superior smear-fastness and water fastness)

IT 224045-19-6P, Hexyl acrylate-methyl methacrylate-acrylamide graft

**copolymer** 224045-20-9P, Hexyl acrylate-methyl methacrylate-polyethylene glycol methyl ether acrylate graft

**copolymer** 224045-21-0P, Octadecyl acrylate-methyl methacrylate-polyethylene glycol methyl ether acrylate graft

**copolymer** 224045-22-1P, (3-Acryloxypropyl)methyldimethoxysilane-methyl methacrylate-polyethylene glycol methyl ether acrylate graft

**copolymer** 224045-23-2P, Hexyl acrylate-maleimide-polyethylene glycol methyl ether acrylate graft **copolymer** 224045-24-3P,

Ethyl acrylate-methyl methacrylate-polyethylene glycol methyl ether acrylate graft **copolymer** 224045-25-4P, Propyl acrylate-methyl

methacrylate-polyethylene glycol methyl ether acrylate graft **copolymer** 224045-26-5P, Butyl acrylate-methyl

methacrylate-polyethylene glycol methyl ether acrylate graft **copolymer** 224045-29-8P, 2-Hydroxyethyl acrylate-methyl

methacrylate-polyethylene glycol methyl ether acrylate graft **copolymer** 224045-31-2P, Phenethyl acrylate-methyl

methacrylate-polyethylene glycol methyl ether acrylate graft **copolymer** 224045-34-5P, 6-Phenylhexyl acrylate-methyl

methacrylate-polyethylene glycol methyl ether acrylate graft **copolymer** 224045-36-7P, Cyclohexyl acrylate-methyl

methacrylate-polyethylene glycol methyl ether acrylate graft **copolymer** 224045-37-8P, N,N-Dihexylacrylamide-methyl

methacrylate-polyethylene glycol methyl ether acrylate graft **copolymer** 224045-38-9P, N,N-Dimethylaminoethyl acrylate-methyl

methacrylate-polyethylene glycol methyl ether acrylate graft **copolymer** 224045-39-0P, Vinyl acetate-methyl

methacrylate-polyethylene glycol methyl ether acrylate graft **copolymer** 224045-40-3P, Vinyl butyl ether-methyl

methacrylate-polyethylene glycol methyl ether acrylate graft **copolymer** 224045-41-4P, Hexyl acrylate-styrene-polyethylene

glycol methyl ether acrylate graft **copolymer** 224045-42-5P, Hexyl acrylate-dimethylstyrene-polyethylene glycol methyl ether acrylate

graft **copolymer** 224045-43-6P, Hexyl acrylate-glycidyl methacrylate-polyethylene glycol methyl ether acrylate graft

**copolymer** 224045-44-7P, Hexyl acrylate-glycidyl acrylate-polyethylene glycol methyl ether acrylate graft **copolymer**

224045-45-8P, Hexyl acrylate-N-hexylmaleimide-polyethylene glycol methyl ether acrylate graft **copolymer** 224045-46-9P, Hexyl

acrylate-N-vinylmaleimide-polyethylene glycol methyl ether acrylate graft **copolymer** 224045-48-1P, Hexyl acrylate-methyl

methacrylate-N-vinyl-4-methylpyrrolidone graft **copolymer** 224045-50-5P, Hexyl acrylate-methyl methacrylate-acrylic acid graft

**copolymer** 224045-51-6P, Hexyl acrylate-methyl

methacrylate-methacrylic acid graft **copolymer** 224045-52-7P,  
 Hexyl acrylate-methyl methacrylate-maleic acid graft **copolymer**  
 224045-53-8P, Hexyl acrylate-methyl methacrylate-vinylbenzoic acid graft  
**copolymer** 224045-54-9P, Hexyl acrylate-methyl  
 methacrylate-vinylsulfonamide graft **copolymer** 224045-55-0P,  
 Hexyl acrylate-methyl methacrylate-sodium acrylate graft **copolymer**  
 224045-56-1P, Ethyl acrylate-methyl methacrylate-  
 (acrylamidopropyl)triethylammonium chloride graft **copolymer**  
 224045-57-2P, Hexyl acrylate-methyl methacrylate-ammonium acrylate graft  
**copolymer** 224045-58-3P, Hexyl acrylate-methyl  
 methacrylate-ammonium methacrylate graft **copolymer**  
 224045-60-7P, Hexyl acrylate-methyl methacrylate-sodium styrenesulfonate  
 graft **copolymer** 224045-61-8P, Methyl methacrylate-hexyl  
 acrylate-polyethylene glycol methyl ether acrylate-acrylic acid graft  
**copolymer** 224047-92-1P, Hydroxyoctadecyl acrylate-methyl  
 methacrylate-polyethylene glycol methyl ether acrylate graft  
**copolymer** 224047-99-8P, Propyl acrylate-methyl  
 methacrylate-vinylpyridine hydrochloride graft **copolymer**  
 224048-41-3P, Hexyl acrylate-tetrafluoropropyl methacrylate-polyethylene  
 glycol methyl ether acrylate graft **copolymer** 224184-44-5P,  
 Lauryl methacrylate-methyl methacrylate-polyethylene glycol methyl ether  
 acrylate graft **copolymer** 224184-45-6P, Octadecyl  
 methacrylate-methyl methacrylate-polyethylene glycol methyl ether acrylate  
 graft **copolymer** 224184-46-7P, Hydroxylauryl  
 methacrylate-methyl methacrylate-polyethylene glycol methyl ether acrylate  
 graft **copolymer** 224184-47-8P, 2-Aminopropyl acrylate-methyl  
 methacrylate-polyethylene glycol methyl ether acrylate graft  
**copolymer** 224184-48-9P, 6-Aminohexyl acrylate-methyl  
 methacrylate-polyethylene glycol methyl ether acrylate graft  
**copolymer** 224184-50-3P, 12-Aminolauryl methacrylate-methyl  
 methacrylate-polyethylene glycol methyl ether acrylate graft  
**copolymer** 224184-51-4P, Hexyl acrylate-trifluoromethylstyrene-  
 polyethylene glycol methyl ether acrylate graft **copolymer**  
 224184-52-5P, Hexyl acrylate-methyl methacrylate-1-vinyl-2-pyrrolidone  
 graft **copolymer** 224184-53-6P, Hexyl acrylate-methyl  
 methacrylate-vinylimidazole graft **copolymer** 224184-54-7P,  
 Hexyl acrylate-methyl methacrylate-2-methylacrylamide graft  
**copolymer** 224184-61-6P, Butyl acrylate-methyl  
 methacrylate-sodium vinyl phosphate graft **copolymer**  
 RL: **SPN (Synthetic preparation)**; TEM (Technical or engineered  
 material use); **PREP (Preparation)**; USES (Uses)

(core shell; printing ink compns. containing core-shell binders and  
 additives for image film having superior smear-fastness and water  
 fastness)

IT 57-10-3, Palmitic acid, uses 57-55-6, 1,2-Propanediol, uses 77-92-9,  
 Citric acid, uses 96-20-8 96-80-0 104-15-4, uses 106-65-0  
 107-15-3, Ethylenediamine, uses 107-21-1, 1,2-Ethanedial, uses  
 110-15-6, Butanedioic acid, uses 110-85-0, Piperazine, uses 110-89-4,  
 Piperidine, uses 110-97-4, Diisopropanolamine 111-55-7, Ethylene  
 glycol diacetate 123-25-1, Diethyl succinate 123-31-9,  
 1,4-Benzenediol, uses 124-40-3, Dimethylamine, uses 141-43-5, uses  
 616-47-7, 1-Methylimidazole 628-67-1, Butylene glycol diacetate  
 1484-84-0, 2-Piperidineethanol 2454-37-7, 3-(1-Hydroxyethyl)aniline  
 3040-44-6, 1-Piperidineethanol 3179-63-3 3433-37-2,  
 2-Piperidinemethanol 4606-65-9, 3-Piperidinemethanol 5138-18-1,  
 Sulfosuccinic acid 6425-32-7, 3-Morpholino-1,2-propanediol 7209-38-3,  
 1,4-Bis(3-aminopropyl) piperazine 9002-89-5, Poly(vinyl alcohol)  
 9002-98-6 9003-01-4, Polyacrylic acid 9003-13-8 9003-20-7,

Poly(vinyl acetate) 9004-74-4 9046-31-5, Poly(vinylbenzoic acid)  
 25087-26-7, Polymethacrylic acid 25265-75-2, Butylene glycol  
 25321-41-9, Xylene sulfonic acid 25322-68-3 25322-69-4, Polypropylene  
 glycol 25736-86-1 25988-97-0 26062-79-3, Poly  
 (diallyldimethylammonium chloride) 26403-58-7 26762-52-7, Hexanediol  
 28574-59-6, Poly(dimethylaminoethyl acrylate) 37286-64-9, Polypropylene  
 glycol methyl ether 39420-45-6, Polypropylene glycol monomethacrylate  
 50858-51-0, Polypropylene glycol monoacrylate 70378-21-1 98961-84-3  
 116770-99-1, Aziridine-ethylene oxide graft **copolymer**  
 154976-19-9 201989-32-4 224322-41-2

RL: MOA (Modifier or additive use); USES (Uses)

(printing ink compns. containing colorant, core-shell binders and additives  
 for image film having superior smear-fastness and water fastness)

IT 9004-98-2 25852-37-3, Butyl acrylate-methyl methacrylate  
**copolymer** 35545-57-4, Solsperse 27000

RL: POF (Polymer in formulation); TEM (Technical or engineered material  
 use); USES (Uses)

(printing ink compns. containing core-shell binders and additives for image  
 film having superior smear-fastness and water fastness)

IT **224045-37-8P**, N,N-Dihexylacrylamide-methyl methacrylate-  
 polyethylene glycol methyl ether acrylate graft **copolymer**

RL: **SPN (Synthetic preparation)**; TEM (Technical or engineered  
 material use); **PREP (Preparation)**; USES (Uses)

(core shell; printing ink compns. containing core-shell binders and  
 additives for image film having superior smear-fastness and water  
 fastness)

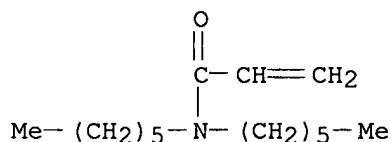
RN 224045-37-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with  
 N,N-dihexyl-2-propenamide and  $\alpha$ -(1-oxo-2-propenyl)- $\omega$ -  
 methoxypoly(oxy-1,2-ethanediyl), graft (9CI) (CA INDEX NAME)

CM 1

CRN 35143-36-3

CMF C15 H29 N O

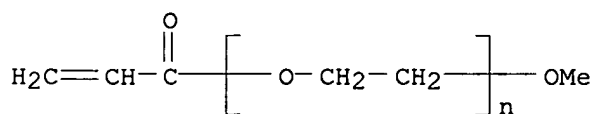


CM 2

CRN 32171-39-4

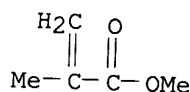
CMF (C2 H4 O)<sub>n</sub> C4 H6 O2

CCI PMS



CM 3

CRN 80-62-6  
CMF C5 H8 O2



RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L60 ANSWER 21 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN  
AN 1998:314742 HCAPLUS  
DN 129:28952  
TI Cationized polymer emulsions and their preparation  
IN Arai, Takeo; Tamura, Akira; Miyata, Masanori; Okita, Yasuo  
PA Mitsui Cyanamid K. K., Japan  
SO Jpn. Kokai Tokkyo Koho, 7 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10130327	A2	19980519	JP 1996-306968	19961101
PRAI	JP 1996-306968		19961101		

AB Title emulsions having highly cationized particle surface and reduced agglomerates, useful for paper strengthening agents, mortar and cement mixing agents, etc., are prepared by neutralizing seed latexes of carboxy-modified synthetic rubbers or resin emulsions to pH  $\geq 6$ , adding H<sub>2</sub>O-insol. or hardly soluble monomers CH<sub>2</sub>:CR<sub>1</sub>AR<sub>2</sub>NR<sub>3</sub>R<sub>4</sub> (R<sub>1</sub> = H, Me; R<sub>2</sub> = C<sub>2</sub>-5 alkylene; R<sub>3</sub>, R<sub>4</sub> = H, C<sub>1</sub>-5 alkyl; A = CO<sub>2</sub>, CONH) in the latexes at an amount greater than the colloid equivalent (absolute value) of the latexes, radically polymerizing the monomers, adding nonionic surfactants in the resulting seed polymers, and neutralizing the polymers with acids or bases or quaternizing amino groups. Thus, carboxy-modified SBR latex 701.3 (pH 8.3, 48% solid, anion colloid equivalent -0.18 mequiv/g), N,N'-methylenebisacrylamide 0.4, H<sub>2</sub>O 159.7, and diethylaminoethyl methacrylate (I) 37.5 g were treated with K2S2O8 at 50° for 2 h to obtain polymer emulsion, which was then mixed with 0.5% (solid) Emulgen 840S (nonionic surfactant) and quaternized with equivalent amount (vs. I) of Me2SO4 to give emulsion containing 0.032% agglomerates.

IC ICM C08F008-44  
ICS C08F002-22; C08F279-02

CC 38-3 (Plastics Fabrication and Uses)  
Section cross-reference(s): 43, 58

IT **Cement** (construction material)  
(mixing agents; manufacture of cationized polymer emulsions with reduced agglomerates)

IT **123723-36-4P** 208103-13-3P **208103-14-4P**  
RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM  
(Technical or engineered material use); **PREP (Preparation)**; USES  
(Uses)

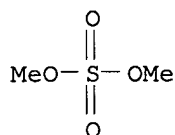
(manufacture of cationized polymer emulsions with reduced agglomerates)  
 IT **123723-36-4P 208103-14-4P**  
 RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM  
 (Technical or engineered material use); **PREP (Preparation)**; USES  
 (Uses)

(manufacture of cationized polymer emulsions with reduced agglomerates)  
 RN 123723-36-4 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 2-(diethylamino)ethyl ester, polymer with  
 N,N'-methylenebis[2-propenamide], compd. with dimethyl sulfate (9CI) (CA  
 INDEX NAME)

CM 1

CRN 77-78-1

CMF C2 H6 O4 S



CM 2

CRN 123723-35-3

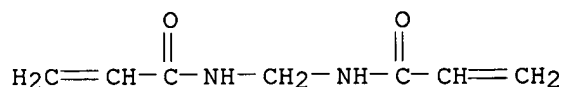
CMF (C10 H19 N O2 . C7 H10 N2 O2)x

CCI PMS

CM 3

CRN 110-26-9

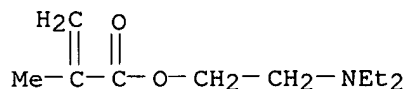
CMF C7 H10 N2 O2



CM 4

CRN 105-16-8

CMF C10 H19 N O2



RN 208103-14-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(diethylamino)ethyl ester, polymer with  
 N,N'-methylenebis[2-propenamide], hydrochloride (9CI) (CA INDEX NAME)

CM 1

CRN 123723-35-3

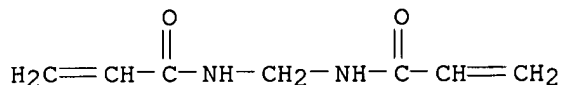
CMF (C10 H19 N O2 . C7 H10 N2 O2)x

CCI PMS

CM 2

CRN 110-26-9

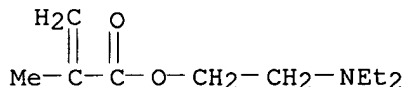
CMF C7 H10 N2 O2



CM 3

CRN 105-16-8

CMF C10 H19 N O2



L60 ANSWER 22 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1998:256346 HCAPLUS

DN 129:16782

TI Dispersing agents useful for stable inorganic pigments with low viscosity

IN Kyuda, Nobuo; Ida, Yoshimi; Yamauchi, Sunao

PA Sanyo Chemical Industries, Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10110015	A2	19980428	JP 1996-286078	19961007
PRAI	JP 1996-286078		19961007		

AB The dispersants comprise (a) 10-99.9 mol% (based on acid groups) alkali metal salts or alkaline earth metal salts of (co)polymers mainly containing  $\alpha,\beta$ -unsatd. carboxylic acids, (b) 0.01-50 mol%  $\geq 1$  of the (co)polymer salts selected from quaternary ammonium salts, ammonium, and organic amines, and (c) 0-89.9 mol% free acid groups. Thus, acrylic acid (I) was polymerized and neutralized with NaOH and triethylmethylammonium Me carbonate to give I homopolymer salts, 0.6 part of which were dispersed in 75 parts  $\text{Ca}(\text{HCO}_3)_2$ . The obtained aqueous slurry showed viscosity 230 mPa-s at 25° and 60 rpm and 2050 mPa-s after 7 days storage at 25°.

IC ICM C08F020-04

ICS C08F022-02

CC 37-6 (Plastics Manufacture and Processing)

IT Carboxylic acids, preparation



RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (**polycarboxylic**, ammonium salts; acrylic (co)polymer salt mixts. as inorg. pigment dispersants)

IT Carboxylic acids, preparation

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (**polycarboxylic**, salts; acrylic (co)polymer salt mixts. as inorg. pigment dispersants)

IT 9003-01-4P, Acrylic acid homopolymer 9003-03-6P, Poly(acrylic acid) ammonium salt 9003-04-7P, Acrylic acid homopolymer sodium salt 25608-12-2P, Poly(acrylic acid) potassium salt 25608-13-3P, Poly(acrylic acid) tetramethylammonium salt, preparation **27936-81-8P**, Poly(acrylic acid) diethanolamine salt 41206-71-7P 175344-08-8P, preparation 207723-93-1P 207723-94-2P 207723-95-3P 207723-98-6P, preparation 207723-99-7P, preparation 207724-00-3P

RL: **IMF (Industrial manufacture)**; POF (Polymer in formulation); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(acrylic (co)polymer salt mixts. as inorg. pigment dispersants)

IT **27936-81-8P**, Poly(acrylic acid) diethanolamine salt

RL: **IMF (Industrial manufacture)**; POF (Polymer in formulation); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(acrylic (co)polymer salt mixts. as inorg. pigment dispersants)

RN 27936-81-8 HCAPLUS

CN 2-Propenoic acid, homopolymer, compd. with 2,2'-iminobis[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 111-42-2

CMF C4 H11 N O2



CM 2

CRN 9003-01-4

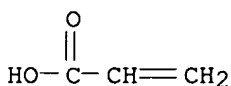
CMF (C3 H4 O2) x

CCI PMS

CM 3

CRN 79-10-7

CMF C3 H4 O2



AN 1998:28722 HCAPLUS  
 DN 128:131520  
 TI Admixtures for concrete and their use, and method for dispersing  
**cement** with, and concrete containing, the admixtures  
 IN Satoh, Haruyuki; Yamato, Fujio; Kono, Yoshinao; Nakamura, Sayuri  
 PA Kao Corp., Japan; Satoh, Haruyuki; Yamato, Fujio; Kono, Yoshinao;  
 Nakamura, Sayuri  
 SO PCT Int. Appl., 42 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9748656	A1	19971224	WO 1997-JP2095	19970618
	W: CN, US, VN				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	JP 10081549	A2	19980331	JP 1997-150709	19970609
	TW 379208	B	20000111	TW 1997-86108064	19970611
	EP 846090	A1	19980610	EP 1997-927384	19970618
	EP 846090	B1	20031001		
	R: DE, FR, GB				
	US 5911820	A	19990615	US 1998-29031	19980220
PRAI	JP 1996-161287	A	19960621		
	WO 1997-JP2095	W	19970618		

AB The admixt. comprise a copolymer comprising, as structural units, units derived from an ethylenically unsatd. monomer (a) containing 25-300 mols C2-3-oxyalkylene groups, and units derived from a monomer (b) of an alkyl, alkenyl or hydroxyalkyl ester of an ethylenically unsatd. mono- or dicarboxylic acid. The admixts. are effective in imparting fluidity to hydraulic compns., e.g., **cement** pastes, mortar, and concrete, especially in maintaining fluidity of the compns., and hardly retard hardening of the compns. A **cement** composition containing 0.27% methoxypolyethylene glycol methacrylate-Me acrylate copolymer telomer with 2-mercaptoethanol gave slump after 120 min 22.5 cm and initial and final setting time 4 h 52 min and 6 h 31 min, vs. 7.0 cm, and 7 h 20 min and 8 h 58 min for a control.

IC ICM C04B024-26

CC 58-2 (Cement, Concrete, and Related Building Materials)

ST acrylic polymer telomer concrete slump; **cement** dispersant  
 acrylic polymer telomer

IT **Cement** (construction material)  
 Concrete

(acrylic telomers as dispersants for)

IT	201793-10-4P	201793-11-5P	201793-12-6P	201793-14-8P	201793-16-0P
	201793-18-2P	201793-20-6P	201793-21-7P	201793-23-9P	201793-24-0P
	201793-25-1P	201793-26-2P	201793-30-8P	201872-78-8P	

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)  
 (dispersant; for concrete)

IT 201793-30-8P

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)  
 (dispersant; for concrete)

RN 201793-30-8 HCAPLUS

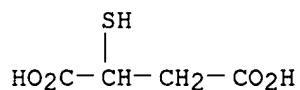
CN Butanedioic acid, mercapto-, sodium salt, telomer with methyl 2-propenoate, 2-methyl-2-propenoic acid and  $\alpha, \alpha'$ -[[1-oxo-2-propenyl]imino]di-2,1-ethanediyl]bis[ $\omega$ -hydroxypoly(oxy-1,2-

ethanediyl)] (9CI) (CA INDEX NAME)

CM 1

CRN 22275-72-5

CMF C4 H6 O4 S . x Na



●x Na

CM 2

CRN 201793-29-5

CMF (C4 H6 O2 . C4 H6 O2 . (C2 H4 O)n (C2 H4 O)n C7 H13 N O3)x

CCI PMS

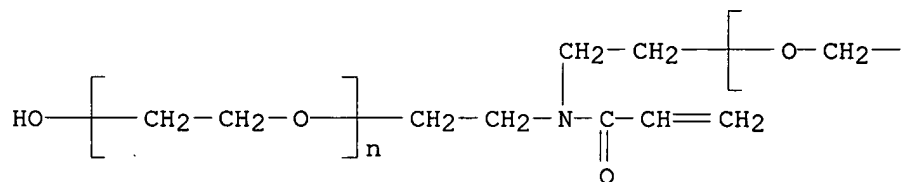
CM 3

CRN 51601-34-4

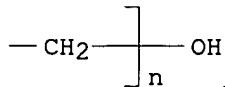
CMF (C2 H4 O)n (C2 H4 O)n C7 H13 N O3

CCI PMS

PAGE 1-A



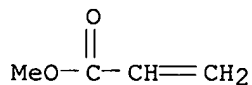
PAGE 1-B



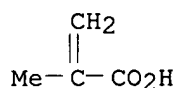
CM 4

CRN 96-33-3

CMF C4 H6 O2



CM 5

CRN 79-41-4  
CMF C4 H6 O2

L60 ANSWER 24 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1997:805770 HCAPLUS

DN 128:49011

TI Thermosetting aqueous compositions for binders for molded products based on fibers, chips, etc.

IN Reck, Bernd; Wistuba, Eckehardt; Beckerle, Wilhelm Friedrich; Mohr, Jurgen; Kistenmacher, Axel; Roser, Joachim

PA BASF Aktiengesellschaft, Germany; Reck, Bernd; Wistuba, Eckehardt; Beckerle, Wilhelm Friedrich; Mohr, Jurgen; Kistenmacher, Axel; Roser, Joachim

SO PCT Int. Appl., 47 pp.

CODEN: PIXXD2

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9745461	A1	19971204	WO 1997-EP2796	19970528
	W: AU, BR, CA, CN, JP, KR, MX, US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	DE 19621573	A1	19971204	DE 1996-19621573	19960529
	AU 9730929	A1	19980105	AU 1997-30929	19970528
	EP 902796	A1	19990324	EP 1997-925964	19970528
	EP 902796	B1	20000329		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	AT 191225	E	20000415	AT 1997-925964	19970528
	ES 2146097	T3	20000716	ES 1997-925964	19970528
	JP 2000511572	T2	20000905	JP 1997-541621	19970528
	US 6114464	A	20000905	US 1998-147310	19981125
	KR 2000016154	A	20000325	KR 1998-709722	19981128
PRAI	DE 1996-19621573	A	19960529		
	WO 1997-EP2796	W	19970528		
AB	Thermosetting mixts. containing hydroxyalkylated polyamines and polymers prepared from 5-100% $\geq 1$ ethylenically unsatd. mono- or dicarboxylic acid are useful as HCHO-free aqueous binders for the title products. Va typical binder composition tested in wood fiberboards contained 50% aqueous				
55:45	acrylic acid-maleic acid copolymer solution 400, 76% aqueous hydroxyethylated hexamethylenediamine (1.05 ethylene oxide) solution 79, and 25% aqueous NH4OH solution 46 g.				
IC	ICM C08F008-30				
	ICS C08K005-17; C08J005-04; C09J133-06				
CC	37-6 (Plastics Manufacture and Processing)				

Section cross-reference(s): 43

ST thermosetting waterborne binder polymeric **polycarboxylic** acid; hydroxyethylated hexamethylenediamine crosslinker polymeric **polycarboxylic** acid; maleic acid copolymer waterborne thermosetting binder; acrylic acid copolymer waterborne thermosetting binder; fiberboard binder formaldehyde free; hydroxyalkylated polyamine thermosetting waterborne binder

IT Binders

(polymeric **polycarboxylic** acids and hydroxylated polyamines; thermosetting aqueous compns. for binders for molded products based on fibers and chips)

IT 200057-02-9P 200057-04-1P 200057-06-3P

200057-08-5P 200057-10-9P 200057-12-1P

200057-14-3P 200057-16-5P 200057-18-7P

RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(thermosetting aqueous compns. for binders for molded products based on fibers and chips)

IT 200057-02-9P 200057-04-1P 200057-06-3P

200057-08-5P 200057-10-9P 200057-14-3P

200057-16-5P 200057-18-7P

RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(thermosetting aqueous compns. for binders for molded products based on fibers and chips)

RN 200057-02-9 HCAPLUS

CN 2-Butenedioic acid (2Z)-, polymer with  $\alpha, \alpha', \alpha'', \alpha'$  ''-[1,6-hexanediylbis(nitrilodi-2,1-ethanediyl)]tetrakis[ $\omega$ -hydroxypoly(oxy-1,2-ethanediyl)] and 2-propenamide (9CI) (CA INDEX NAME)

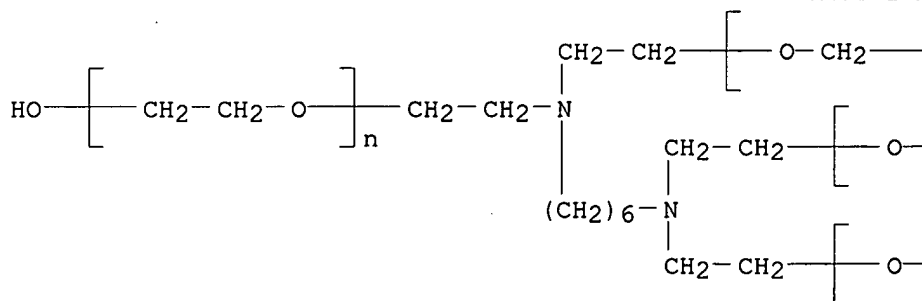
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CRN 39968-51-9

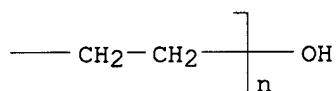
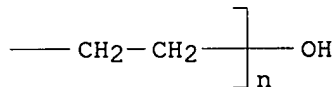
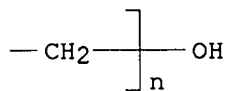
CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C14 H32 N2 O4

CCI PMS

PAGE 1-A



PAGE 1-B

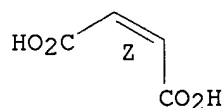


CM 2

CRN 110-16-7

CMF C4 H4 O4

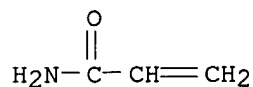
Double bond geometry as shown.



CM 3

CRN 79-06-1

CMF C3 H5 N O



RN 200057-04-1 HCAPLUS

CN 2-Butenedioic acid (2Z)-, polymer with aziridine, oxirane and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 151-56-4

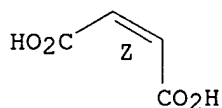
CMF C2 H5 N



CM 2

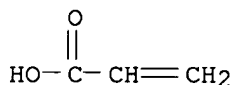
CRN 110-16-7  
CMF C4 H4 O4

Double bond geometry as shown.



CM 3

CRN 79-10-7  
CMF C3 H4 O2



CM 4

CRN 75-21-8  
CMF C2 H4 O

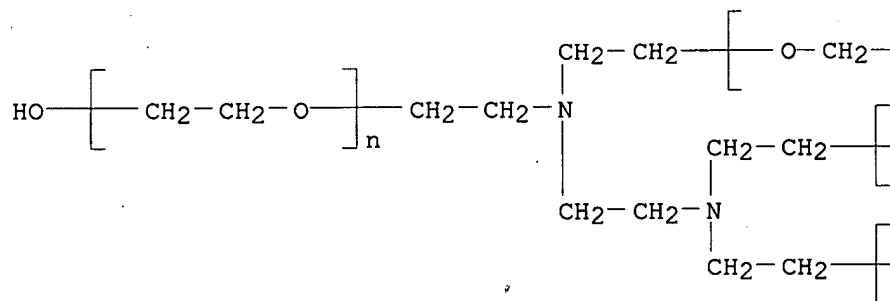


RN 200057-06-3 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with  $\alpha, \alpha', \alpha'', \alpha'''$ , .alph  
a. '''-[1,2-ethanediylbis(nitrilodi-2,1-ethanediyl)]tetrakis[ $\omega$ -  
hydroxypoly(oxy-1,2-ethanediyl)] and methyl 2-methyl-2-propenoate (9CI)  
(CA INDEX NAME)

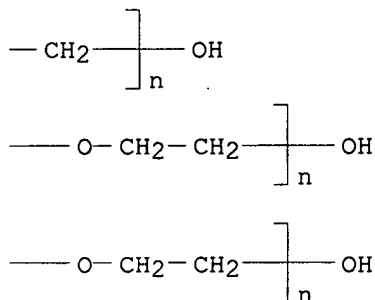
CM 1

CRN 27014-42-2  
CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C10 H24 N2 O4  
CCI PMS

PAGE 1-A



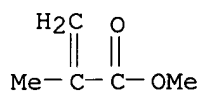
PAGE 1-B



CM 2

CRN 80-62-6

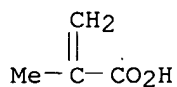
CMF C5 H8 O2



CM 3

CRN 79-41-4

CMF C4 H6 O2



RN 200057-08-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,2-ethanediyl) ether with 2,2',2'',2'''-[[[(2-hydroxyethyl)imino]bis(2,1-ethanediyl)nitrilo]tetrakis[ethanol] (5:1) and



2-propenoic acid (9CI) (CA INDEX NAME)

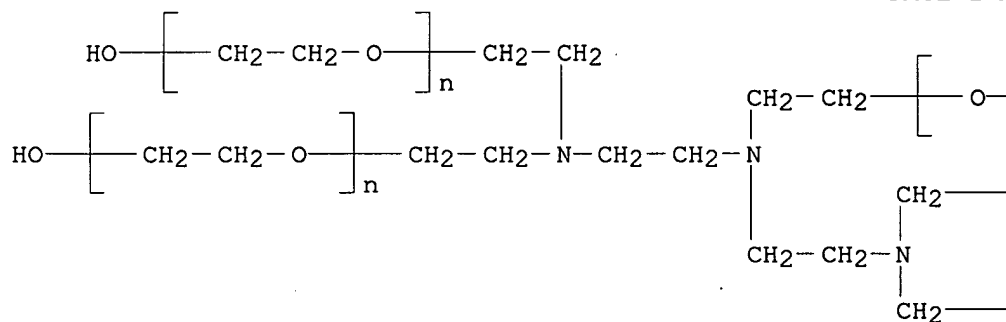
CM 1

CRN 39940-23-3

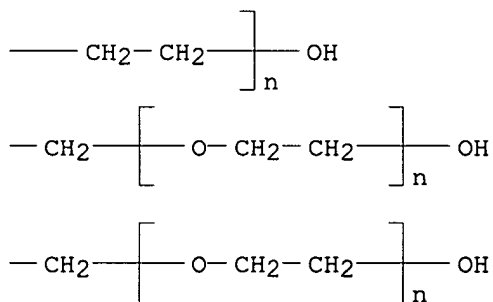
CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C14 H33 N3 O5

CCI PMS

PAGE 1-A



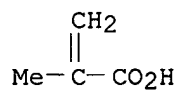
PAGE 1-B



CM 2

CRN 79-41-4

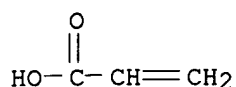
CMF C4 H6 O2



CM 3

CRN 79-10-7

CMF C3 H4 O2



RN 200057-10-9 HCAPLUS

CN 2-Propenoic acid, polymer with ethyl 2-propenoate and  $\alpha$ -hydro-  
 $\omega$ -hydroxypoly(oxy-1,2-ethanediyl) ether with 2,2',2'',2'''-[[ (2-  
hydroxyethyl)imino]bis(2,1-ethanediyl)nitri]tetrakis[ethanol] (5:1)  
(9CI) (CA INDEX NAME)

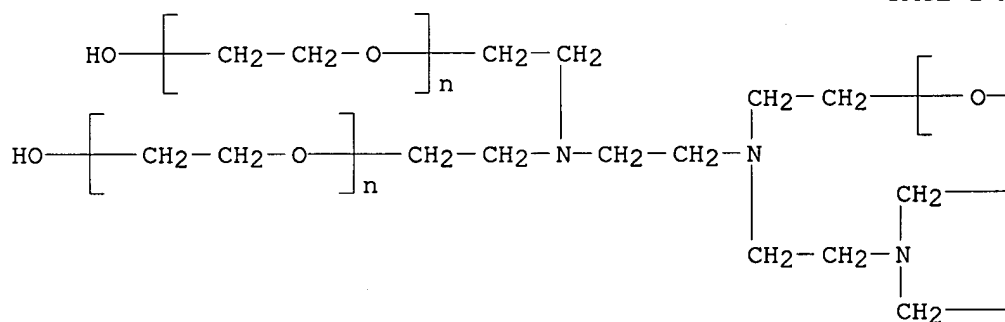
CM 1

CRN 39940-23-3

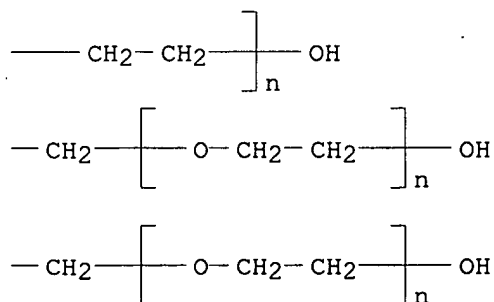
CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C14 H33 N3 O5

CCI PMS

PAGE 1-A



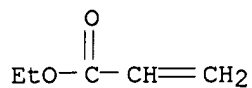
PAGE 1-B



CM 2

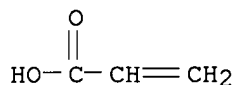
CRN 140-88-5

CMF C5 H8 O2



CM 3

CRN 79-10-7  
CMF C3 H4 O2

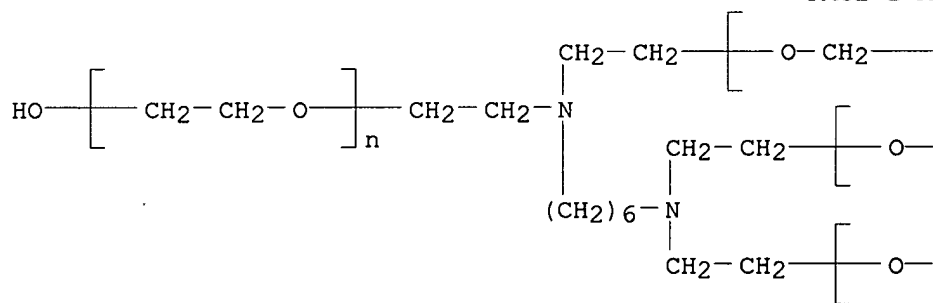


RN 200057-14-3 HCAPLUS  
CN 2-Propenoic acid, polymer with  $\alpha, \alpha', \alpha'', \alpha'''$ -[1,6-hexanediylbis(nitrilodi-2,1-ethanediyl)] tetrakis[ $\omega$ -hydroxypoly(oxy-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

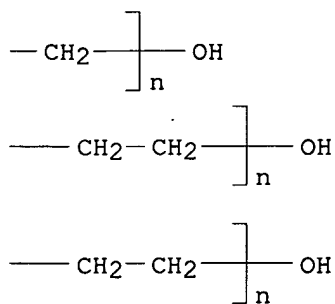
CM 1

CRN 39968-51-9  
CMF (C2 H4 O)<sub>n</sub> (C2 H4 O)<sub>n</sub> (C2 H4 O)<sub>n</sub> (C2 H4 O)<sub>n</sub> C14 H32 N2 O4  
CCI PMS

PAGE 1-A

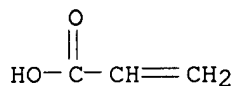


PAGE 1-B



CM 2

CRN 79-10-7  
CMF C3 H4 O2



RN 200057-16-5 HCAPLUS  
CN 2-Butenedioic acid (2Z)-, polymer with aziridine, 2,2',2''-nitrilotris[ethanol], oxirane and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

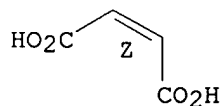
CRN 151-56-4  
CMF C2 H5 N



CM 2

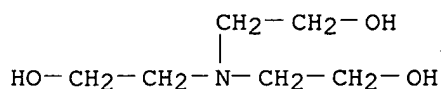
CRN 110-16-7  
CMF C4 H4 O4

Double bond geometry as shown.



CM 3

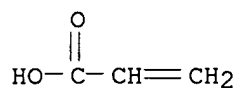
CRN 102-71-6  
CMF C6 H15 N O3



CM 4

CRN 79-10-7

CMF C3 H4 O2



CM 5

CRN 75-21-8

CMF C2 H4 O



RN 200057-18-7 HCAPLUS

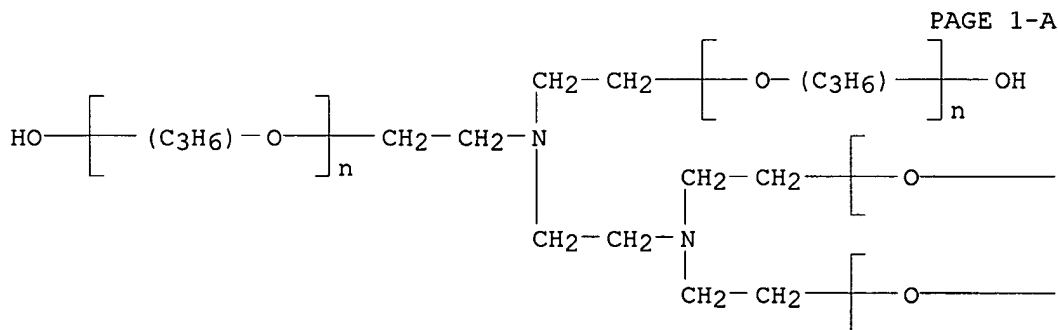
CN 2-Butenedioic acid (2Z)-, polymer with  $\alpha, \alpha', \alpha'', \alpha'$   
 ''-[1,2-ethanediylbis[nitrilobis(methyl-2,1-ethanediyl)]]tetrakis[ $\omega$ -  
 hydroxypoly[oxy(methyl-1,2-ethanediyl)]] and 2-propenoic acid (9CI) (CA  
 INDEX NAME)

CM 1

CRN 51178-86-0

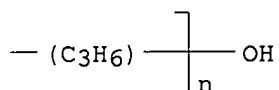
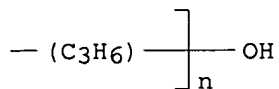
CMF (C3 H6 O)n (C3 H6 O)n (C3 H6 O)n (C3 H6 O)n C14 H32 N2 O4

CCI IDS, PMS



4 ( D1-Me )

PAGE 1-B

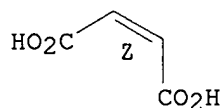


CM 2

CRN 110-16-7

CMF C4 H4 O4

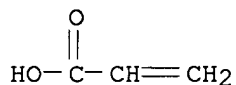
Double bond geometry as shown.



CM 3

CRN 79-10-7

CMF C3 H4 O2



L60 ANSWER 25 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1997:90304 HCAPLUS

DN 126:105517

TI Reactive lubricating agent-containing hydrophilic coating compositions for heat-exchanger fins, fins therewith, and their manufacture

IN Kato, Masashi; Katsumata, Tsuyoshi; Masago, Chihiro; Kawahara, Rieko

PA Mitsubishi Aluminium, Japan; Kyoeisha Kagaku Kk

SO Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08302277	A2	19961119	JP 1995-106657	19950428
PRAI	JP 1995-106657		19950428		

KATHLEEN FULLER EIC 1700/PARKER LAW 308-4290

AB Title aqueous compns. comprise aqueous epoxides, hydrophilic resins, and reactive

lubricating agents prepared by reacting nonionic polymeric surfactants (having a m.p. of  $\geq 50^\circ$  and a Karabinos cloudy point of  $\geq 15.5$ ) with **polycarboxylic** acids and with organic bases. An

Al fin was sprayed with an aqueous composition containing acrylic acid-acrylonitrile-n-

amyl methacrylate-Bu acrylate-crotonic acid-cyclohexyl methacrylate-2,3-dihydroxypropyl acrylate-2-hydroxyethyl methacrylate-itaconic acid-maleic anhydride-Me acrylate-potassium 2-acrylamido-2-methylpropane-1-sulfonate-potassium 2-hydroxy-3-acryloxypropane-1-sulfonate-sodium allylsulfonate copolymer ammonium sodium and Et3N salt, diethylene glycol diglycidyl ether, and polyoxyethylene 2-ethylhexyl ether monosuccinate NH4+ and Et3N salt to form a fin with water-contact angle  $\leq 30^\circ$  after soaking in water for 240 h, dynamic friction coefficient (without spreading with press. oils)  $\leq 0.1$ , and good oil-resistant adhesion ad press processability.

IC ICM C09D163-00

ICS C09D005-00

CC 42-10 (Coatings, Inks, and Related Products)

Section cross-reference(s): 46

IT Carboxylic acids, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(**polycarboxylic**, for manufacture of reactive lubricants; reactive lubricant-containing aqueous epoxide-crosslinked hydrophilic resin coatings

for

heat changers)

IT 185424-98-0P 185425-00-7P 185425-01-8DP, hydrogenated castor oil monoethers 185425-03-0P **185425-04-1P** 185425-06-3P

185425-08-5P 185468-78-4P 185531-74-2P

RL: **IMF (Industrial manufacture)**; MOA (Modifier or additive use); **PREP (Preparation)**; USES (Uses)

(reactive lubricant; reactive lubricant-containing aqueous epoxide-crosslinked

hydrophilic resin coatings for heat changers)

IT **185425-04-1P**

RL: **IMF (Industrial manufacture)**; MOA (Modifier or additive use); **PREP (Preparation)**; USES (Uses)

(reactive lubricant; reactive lubricant-containing aqueous epoxide-crosslinked

hydrophilic resin coatings for heat changers)

RN 185425-04-1 HCAPLUS

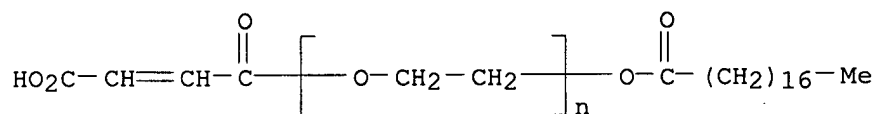
CN Ethanol, 2,2',2''-nitrilotris-, compd. with  $\alpha$ -(3-carboxy-1-oxo-2-propenyl)- $\omega$ -[(1-oxooctadecyl)oxy]poly(oxy-1,2-ethanediyl) and N,N-diethylethanamine, ammonium salt (9CI) (CA INDEX NAME)

CM 1

CRN 32106-74-4

CMF (C2 H4 O)n C22 H38 O5

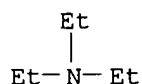
CCI PMS



CM 2

CRN 121-44-8

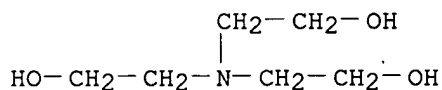
CMF C6 H15 N



CM 3

CRN 102-71-6

CMF C6 H15 N O3



L60 ANSWER 26 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1996:569304 HCAPLUS

DN 125:228957

TI Water-soluble polymer-based **cement** dispersant compositions

IN Tanaka, Akira; Myauchi, Haruyoshi; Ooshima, Nobuo; Nakamura, Yoshinobu

PA Toho Chem Ind Co Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08165156	A2	19960625	JP 1993-48797	19930216
PRAI	JP 1993-48797		19930216		

AB The comps. contain the polymers obtained by copolymerization of CH<sub>2</sub>:CRCO<sub>2</sub>M (R = H, Me; M = monovalent alkali metal, alkanolammonium) 0-20, CH<sub>2</sub>:CRCO<sub>2</sub>(C<sub>2</sub>H<sub>4</sub>O)<sub>x</sub>(R'O)<sub>y</sub>H (x = 5-30; y = 1-5; R' = propylene, butylene) 10-80, and sulfonates 10-70%. When the low-foaming dispersant comps. are used, the **cement** comps. obtained have low air content and high initial-fluidity, stability, and dispersibility.

IC ICM C04B024-26

ICS C08L033-02; C08L033-14

CC 58-1 (Cement, Concrete, and Related Building Materials)

Section cross-reference(s): 37

ST water sol polymer **cement** dispersant; acrylic polyoxyalkylene



copolymer **cement** dispersant

IT **Cement**  
Dispersing agents  
(water-soluble polymer-based **cement** dispersant compns.)

IT Polyoxyalkylenes, preparation  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
(acrylic, water-soluble polymer-based **cement** dispersant compns.)

IT Acrylic polymers, preparation  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
(polyoxyalkylene-, water-soluble polymer-based **cement** dispersant compns.)

IT 155676-30-5P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and polymerization of; water-soluble polymer-based **cement** dispersant compns.)

IT 181487-75-2P 181487-78-5P 181487-80-9P 181487-82-1P 181487-84-3P  
181487-86-5P **181487-88-7P**  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
(water-soluble polymer-based **cement** dispersant compns.)

IT **181487-88-7P**  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
(water-soluble polymer-based **cement** dispersant compns.)

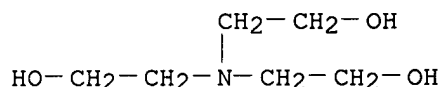
RN 181487-88-7 HCAPLUS

CN 2-Propenoic acid, polymer with epoxybutane polymer with oxirane mono-2-propenoate, and ethenesulfonic acid, compd. with 2,2',2''-nitrilotris[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 102-71-6

CMF C6 H15 N O3



CM 2

CRN 181487-87-6

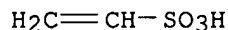
CMF ((C4 H8 O . C2 H4 O)x . C3 H4 O2 . C3 H4 O2 . C2 H4 O3 S)x

CCI PMS

CM 3

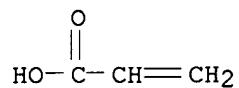
CRN 1184-84-5

CMF C2 H4 O3 S



CM 4

CRN 79-10-7  
CMF C3 H4 O2

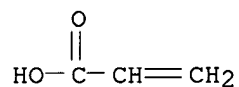


CM 5

CRN 181487-76-3  
CMF (C4 H8 O . C2 H4 O)x . C3 H4 O2

CM 6

CRN 79-10-7  
CMF C3 H4 O2

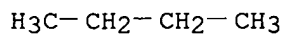


CM 7

CRN 9064-31-7  
CMF (C4 H8 O . C2 H4 O)x  
CCI PMS

CM 8

CRN 26249-20-7  
CMF C4 H8 O  
CCI IDS



D1-O-D1

CM 9

CRN 75-21-8  
CMF C2 H4 O



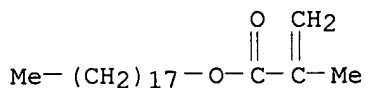
L60 ANSWER 27 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN  
 AN 1996:567696 HCAPLUS  
 DN 125:255282  
 TI Study on synthesis and application of polymer dispersion for  
**cement** modifier (II) -waterproofing effect on **cement**  
 mortar using acrylic copolymer-  
 AU Kim, Hong-Dai; Kim, Young-Geun; Kim, Seung-Jin; Park, Hong-Soo  
 CS Korea Institute of Construction Materials, Seoul, 152-023, S. Korea  
 SO Kongop Hwahak (1996), 7(4), 679-690  
 CODEN: KOHWE9; ISSN: 1225-0112  
 PB Korean Society of Industrial and Engineering Chemistry  
 DT Journal  
 LA Korean  
 AB Acrylic copolymer was synthesized from 2-dimethylaminoethyl methacrylate  
 and alkylmethacrylate containing long chain hydrocarbon groups. To facilitate  
 emulsification in water, acrylic copolymer was treated with acetic acid,  
 and therefore acetated acrylic copolymer was produced. Acetated acrylic  
 copolymer was perfectly emulsified in water and showed increased emulsion  
 stability. Polymer as a **cement** dispersion agent(PDCM-PSD) was  
 prepared by blending the newly synthesized acetated acrylic copolymer with  
 sodium gluconate, oleic acid, and triethanolamine. The applicability of  
 the blended polymer was examined, and it was found that the effects on  
 dispersion and water-proofing (0.3.apprx.0.5) were excellent.  
 CC 58-2 (Cement, Concrete, and Related Building Materials)  
 ST **cement** mortar acrylic copolymer waterproofing additive;  
 waterproofing agent acrylic copolymer **cement** mortar; dispersing  
 agent acrylic copolymer **cement** mortar  
 IT Dispersing agents  
 (acrylic copolymer; synthesis and dispersion/waterproofing effects of  
 acrylic copolymer additive for **cement** mortar)  
 IT Mortar  
 (**cement**; synthesis and dispersion/waterproofing effects of  
 acrylic copolymer additive for **cement** mortar)  
 IT Waterproofing  
 (agents, acrylic copolymer; synthesis and dispersion/waterproofing  
 effects of acrylic copolymer additive for **cement** mortar)  
 IT 102-71-6P, Ethanol, 2,2',2''-nitrilotris-, preparation 105-16-8P,  
 2-Diethylaminoethyl methacrylate 112-80-1P, Oleic acid, preparation  
 527-07-1P, Sodium gluconate **25267-71-4P** 32360-05-7P, Stearyl  
 Methacrylate  
 RL: PRP (Properties); SPN (Synthetic preparation); TEM  
 (Technical or engineered material use); PREP (Preparation); USES  
 (Uses)  
 (dispersion/waterproofing agent; synthesis and dispersion/waterproofing  
 effects of acrylic copolymer additive for **cement** mortar)  
 IT **25267-71-4P**  
 RL: PRP (Properties); SPN (Synthetic preparation); TEM  
 (Technical or engineered material use); PREP (Preparation); USES  
 (Uses)  
 (dispersion/waterproofing agent; synthesis and dispersion/waterproofing  
 effects of acrylic copolymer additive for **cement** mortar)  
 RN 25267-71-4 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 2-(diethylamino)ethyl ester, polymer with

octadecyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 32360-05-7

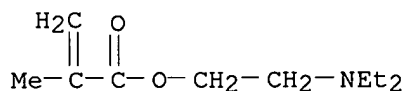
CMF C22 H42 O2



CM 2

CRN 105-16-8

CMF C10 H19 N O2



L60 ANSWER 28 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1996:345444 HCAPLUS

DN 125:13493

TI Pre-coated steel panels and their manufacture

IN Aoki, Susumu; Katsuyama, Hiroki; Mizutani, Hiroki; Ishidoya, Masahiro

PA Nippon Oils &amp; Fats Co Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 29 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08073811	A2	19960319	JP 1994-304227	19941115
PRAI	JP 1994-168628		19940629		

AB Coated steel panels, with good chemical, impact, soil, solvent, and weather resistance, are prepared by spreading stainless or Zn (alloy)- and/or Al (alloy)-plated steel panels with primers, (optionally with middle compns.) and covering with thermally curable top compns. containing polymers (A) containing

≥2 (R4Y)CR1(OCO)CHR2R3 groups (R1-R3 = H, C1-18 hydrocarbyl; R4 = C1-18 hydrocarbyl; Y = O, S; R3 and R4 could form rings with Y), polymers (B) containing functional groups reactive to functional groups of A, and/or latent acidic catalysts, or containing self-crosslinkable polymers containing functional groups in A and B and/or the catalysts. A top composition comprised Bu methacrylate-(1-ethoxy)ethyl methacrylate-2-ethylhexyl acrylate-Me methacrylate copolymer, Denacol Ex 421, TiO2, and a leveling agent in xylene and BuOAc and was baked at 230° for 50 s to form a 15-μm film.

IC ICM C09D201-02

ICS B05D007-14; B05D007-24; B32B015-08

CC 42-10 (Coatings, Inks, and Related Products)

IT 77-99-6DP, Trimethylolpropane, reaction products with Me orthoformate and Bu vinyl ether, polymers with latent **polycarboxylic** group-containing acrylic polymers 85-42-7DP, Hexahydrophthalic anhydride, reaction products with diols or polyols and alkyl vinyl ethers, polymers with glycidyl-containing acrylic polymers 106-14-9DP, 12-Hydroxystearic acid, reaction products with HMDI trimer and Pr vinyl ether, polymers with glycidyl-containing acrylic polymers 109-53-5DP, Isobutyl vinyl ether, reaction products with (methyl)hexahydrophthalic anhydride and diols or polyols, polymers with glycidyl-containing acrylic polymers 109-92-2DP, Ethyl vinyl ether, reaction products with (methyl)hexahydrophthalic anhydride and diols or polyols, polymers with glycidyl-containing acrylic polymers 111-34-2DP, Butyl vinyl ether, reaction products with Me orthoformate and trimethylolpropane, polymers with latent **polycarboxylic** group-containing acrylic polymers 115-77-5DP, Pentaerythritol, reaction products with methylhexahydrophthalic anhydride and alkyl vinyl ethers, polymers with glycidyl-containing acrylic polymers 126-30-7DP, Neopentyl glycol, reaction products with hexahydrophthalic anhydride and hydroxysiloxanes and Pr vinyl ether, polymers with glycidyl-containing acrylic polymers 149-73-5DP, Methyl orthoformate, reaction products with Bu vinyl ether and trimethylolpropane, polymers with latent **polycarboxylic** group-containing acrylic polymers 764-47-6DP, Propyl vinyl ether, reaction products with HMDI trimer and hydroxystearic acid, polymers with glycidyl-containing acrylic polymers 25550-51-0DP, Methylhexahydrophthalic anhydride, reaction products with diols or polyols and alkyl vinyl ethers, polymers with glycidyl-containing acrylic polymers 28574-90-5DP, HMDI trimer, reaction products with hydroxystearic acid and Pr vinyl ether, polymers with glycidyl-containing acrylic polymers 62695-06-1DP, Butyl methacrylate-2-ethylhexyl acrylate-glycidyl methacrylate-methyl methacrylate copolymer, polymers with latent **polycarboxylic** compds. 111310-09-9DP, k-Flex 188-50, reaction products with hexahydrophthalic anhydride and alkyl vinyl ethers, polymers with glycidyl-containing acrylic polymers 131715-70-3DP, Flexorez Ud 320, reaction products with hexahydrophthalic anhydride and alkyl vinyl ethers, polymers with glycidyl-containing acrylic polymers 138636-57-4DP, Placel E 488, reaction products with methylhexahydrophthalic anhydride and alkyl vinyl ethers, polymers with glycidyl-containing acrylic polymers 151165-17-2DP, polymers with hydroxy siloxanes or polyol-polyacetal reaction products 170146-03-9P  
**170146-04-0P** 170146-07-3P 170146-08-4P 170385-33-8P  
 RL: **IMF (Industrial manufacture)**; TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
 (thermally curable functional acrylic polymer top coatings for steel panels)

IT **170146-04-0P**  
 RL: **IMF (Industrial manufacture)**; TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
 (thermally curable functional acrylic polymer top coatings for steel panels)

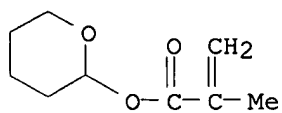
RN 170146-04-0 HCAPLUS

CN 1-Aziridinepropanoic acid, 2-[[3-(1-aziridinyl)-1-oxopropoxy]methyl]-2-ethyl-1,3-propanediyl ester, polymer with butyl 2-methyl-2-propenoate, 2-ethylhexyl 2-propenoate, methyl 2-methyl-2-propenoate and tetrahydro-2H-pyran-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 52858-59-0

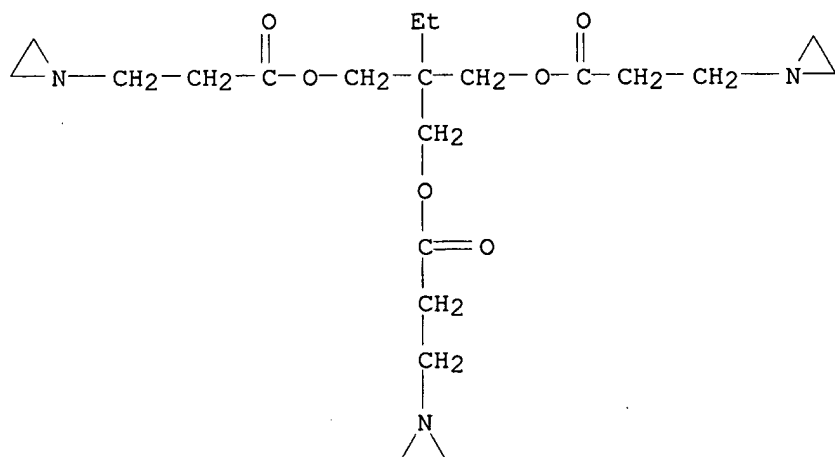
CMF C9 H14 O3



CM 2

CRN 52234-82-9

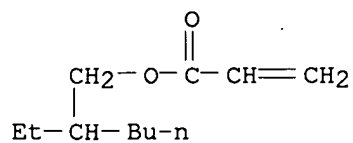
CMF C21 H35 N3 O6



CM 3

CRN 103-11-7

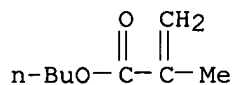
CMF C11 H20 O2



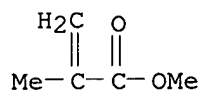
CM 4

CRN 97-88-1

CMF C8 H14 O2



CM 5

CRN 80-62-6  
CMF C5 H8 O2

L60 ANSWER 29 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN  
 AN 1995:995433 HCAPLUS  
 DN 124:59637  
 TI Oligoamide-epihalohydrin resins as drainage aids for papermaking  
 IN Dasgupta, Sunil Priya; Espy, Herbert Hasting  
 PA Hercules Inc., USA  
 SO Eur. Pat. Appl., 12 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 678620	A2	19951025	EP 1995-105755	19950418
	EP 678620	A3	19960717		
	R: AT, DE, ES, FR, GB, GR, IT, NL, SE				
	US 5656699	A	19970812	US 1994-229254	19940418
	CA 2146922	AA	19951019	CA 1995-2146922	19950412
	FI 9501823	A	19951019	FI 1995-1823	19950413
	NO 9501463	A	19951019	NO 1995-1463	19950418
	AU 9516507	A1	19951026	AU 1995-16507	19950418
	JP 07292102	A2	19951107	JP 1995-92763	19950418
	BR 9501711	A	19951114	BR 1995-1711	19950418
	CN 1125277	A	19960626	CN 1995-105749	19950418
PRAI	US 1994-229254		19940418		

AB A water-soluble drainage-aid composition containing the reaction product of a bifunctional crosslinking agent, e.g. epihalohydrin, with an amine-terminated oligoamide derived from polyalkylenepolyamine and **polycarboxylic** acid or its derivs. is disclosed. Heating adipic acid with diethylenetriamine at amine/acid molar ratio 1.5 and 170° for 2.6 h gave an oligoamide which was dissolved in water and heated with epihalohydrin at 70° to prepare a draining aid for papermaking.

IC ICM D21H021-10  
ICS D21H017-55

CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)  
Section cross-reference(s): 38

IT 25085-15-8P 25212-19-5P, Adipic acid-diethylenetriamine-epichlorohydrin copolymer 26568-79-6P, Adipic acid-epichlorohydrin-triethylenetetramine copolymer **52404-84-9P**, Diethylenetriamine-epichlorohydrin-itaconic acid copolymer 52470-29-8P 68867-69-6P, Diethylenetriamine-dimethyl glutarate-epichlorohydrin copolymer 172084-36-5P 172084-37-6P 172084-38-7P

RL: **IMF** (Industrial manufacture); TEM (Technical or engineered material use); **PREP** (Preparation); USES (Uses)

(oligoamide-epihalohydrin resins as drainage aids for papermaking)  
 IT 52404-84-9P, Diethylenetriamine-epichlorohydrin-itaconic acid  
 copolymer

RL: IMF (Industrial manufacture); TEM (Technical or engineered  
 material use); PREP (Preparation); USES (Uses)

(oligoamide-epihalohydrin resins as drainage aids for papermaking)

RN 52404-84-9 HCAPLUS

CN Butanedioic acid, methylene-, polymer with N-(2-aminoethyl)-1,2-  
 ethanediamine and (chloromethyl)oxirane (9CI) (CA INDEX NAME)

CM 1

CRN 111-40-0

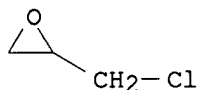
CMF C4 H13 N3



CM 2

CRN 106-89-8

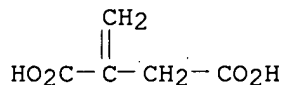
CMF C3 H5 Cl O



CM 3

CRN 97-65-4

CMF C5 H6 O4



L60 ANSWER 30 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1995:938441 HCAPLUS

DN 124:95602

TI Slump loss-preventing admixtures for cement

IN Honda, Susumu; Kinoshita, Seigo; Ito, Akinori

PA Nippon Oils & Fats Co Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

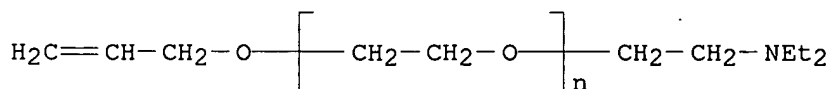
LA Japanese

FAN.CNT 1

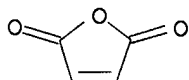
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	JP 07187742	A2	19950725	JP 1993-347364	19931224



JP 3265784 B2 20020318  
 PRAI JP 1993-347364 19931224  
 AB The admixts. contain a copolymer prepared from polyoxyalkylene derivs. having general formula (R1)2N(AO)nR2 (R1 = C1-5-hydrocarbyl; AO = C2-4-oxyalkylene containing ≥50 mol.% oxyethylene; n = 1-200; R2 = C2-5-alkenyl) and ≥1 compds. selected from maleic anhydride, maleic acid, and maleates. Mortar prepared from water 180, **cement** 360, and sand 1080 g, under addition of 0.15 weight% (based on **cement**) copolymer prepared from 1.0 mol Me2N(C2H4O)11CH2CH:CH2 and 1.0 mol maleic anhydride had slump value and air content at 0, 30, and 60 min 239, 211, and 186 mm, and 3.0, 3.1, and 3.1%, resp., and initial and final setting time 6 h and 8 h 5 min.  
 IC ICM C04B024-26  
 ICS C08F222-02; C08F222-06; C08F290-06  
 ICI C04B103-30  
 CC 58-1 (Cement, Concrete, and Related Building Materials)  
 Section cross-reference(s): 38  
 ST slump **cement** polyoxyalkylene maleate copolymer; maleic acid anhydride polyoxyalkylene **cement**  
 IT **Cement**  
 (polyoxyalkylene derivative-maleate copolymers for slump loss prevention of **cement**)  
 IT 172600-62-3P 172600-63-4P 172600-64-5P 172600-65-6P 172600-66-7P  
 172600-68-9P **172600-70-3P 172600-72-5P** 172600-74-7P  
 RL: MOA (Modifier or additive use); PNU (Preparation, unclassified); **PREP (Preparation)**; USES (Uses)  
 (polyoxyalkylene derivative-maleate copolymers for slump loss prevention of **cement**)  
 IT **172600-70-3P 172600-72-5P**  
 RL: MOA (Modifier or additive use); PNU (Preparation, unclassified); **PREP (Preparation)**; USES (Uses)  
 (polyoxyalkylene derivative-maleate copolymers for slump loss prevention of **cement**)  
 RN 172600-70-3 HCAPLUS  
 CN 2,5-Furandione, polymer with α-[2-(diethylamino)ethyl]-ω-(2-propenyloxy)poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 172600-69-0  
 CMF (C2 H4 O)n C9 H19 N O  
 CCI PMS



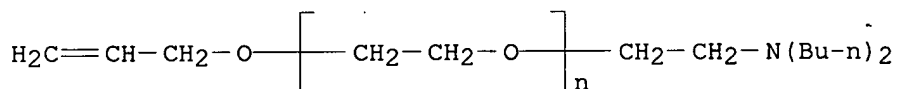
CM 2  
 CRN 108-31-6  
 CMF C4 H2 O3



RN 172600-72-5 HCAPLUS  
 CN 2,5-Furandione, polymer with  $\alpha$ -[2-(dibutylamino)ethyl]- $\omega$ -(2-propenyloxy)poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

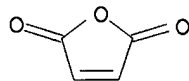
CM 1

CRN 172600-71-4  
 CMF (C2 H4 O)<sub>n</sub> C13 H27 N O  
 CCI PMS



CM 2

CRN 108-31-6  
 CMF C4 H2 O3



L60 ANSWER 31 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN  
 AN 1995:909394 HCAPLUS  
 DN 123:315652  
 TI Curable compositions containing components having blocked carboxyl groups, components having groups reactable with carboxyl groups, and acid catalysts for moldings and coatings  
 IN Nakane, Yoshinori; Mizutani, Hiroki; Ishibashi, Hayato; Ishidoya, Masahiro  
 PA Nof Corp., Japan  
 SO Can. Pat. Appl., 157 pp.  
 CODEN: CPXXEB  
 DT Patent  
 LA English  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CA 2131416	AA	19950307	CA 1994-2131416	19940902
	JP 08041208	A2	19960213	JP 1994-203026	19940805
	US 5661219	A	19970826	US 1994-297588	19940829
	US 5922633	A	19990713	US 1997-844050	19970418
	US 6030571	A	20000229	US 1997-862057	19970522
PRAI	JP 1993-243512		19930906		
	JP 1993-243513		19930906		
	JP 1994-58368		19940304		

JP 1994-66470	19940311
JP 1994-73778	19940322
JP 1994-79239	19940328
JP 1994-130900	19940523
JP 1994-130901	19940523
US 1994-297588	19940829

OS MARPAT 123:315652

AB Compns. containing the title components provide coatings with good chemical and phys. properties and weather and staining resistance and moldings with good mech. and insulating properties and moisture, corrosion, and cracking resistance. In 1-component compns. based on the above reactable components or a self-crosslinking component, the catalyst is a thermal-latent-type based on a combination of an epoxide, a S-containing compound, and a Lewis acid, a combination of a compound containing  $\geq 1$  of N, O, P, and S atom, a compound containing a halogen, and a Lewis acid containing  $\geq 1$  of an Al, Zn, and Sn atom, or a combination of a metallic chelate, and an organic silicon compound or condensate. A 2-component compns. curable at for the above uses contain the above reactable components and  $\geq 1$  of a Broensted acid, a Lewis acid, and a mixture of a metallic chelate and a compound having a silanol group. A typical thermosetting molding composition contained 100 parts mixture of 272.3 parts trifunctional **polycarboxylic** acid prepared from 420.4 parts hexahydrophthalic anhydride and 134.2 parts trimethylolpropane, 129.2 parts Pr vinyl ether, and 0.2 parts 2-ethylhexyl phosphate mixture, 175 parts YD-128 epoxide crosslinker, and 7.5 parts thermal latent catalyst containing cyclohexene oxide 9.82, Bu2S 14.63, ZnCl2 13.63, and octanoic acid 28.84 parts.

IC ICM C08G083-00

ICS C08L101-02; B05D001-36

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 42

IT 170146-03-9P **170146-04-0P** 170146-05-1P 170146-06-2P

170146-07-3P 170146-08-4P 170146-09-5P 170385-33-8P

RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM(Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(curable compns. containing components having blocked carboxyl groups, components having groups reactable with carboxyl groups, and acid catalysts for moldings and coatings)

IT **170146-04-0P**RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM(Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(curable compns. containing components having blocked carboxyl groups, components having groups reactable with carboxyl groups, and acid catalysts for moldings and coatings)

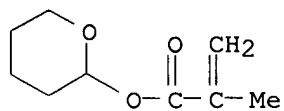
RN 170146-04-0 HCAPLUS

CN 1-Aziridinepropanoic acid, 2-[[3-(1-aziridinyl)-1-oxopropoxy]methyl]-2-ethyl-1,3-propanediyl ester, polymer with butyl 2-methyl-2-propenoate, 2-ethylhexyl 2-propenoate, methyl 2-methyl-2-propenoate and tetrahydro-2H-pyran-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 52858-59-0

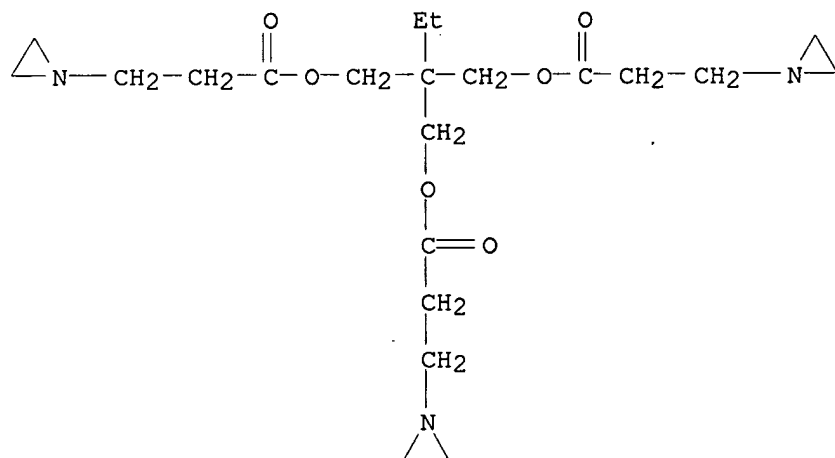
CMF C9 H14 O3



CM 2

CRN 52234-82-9

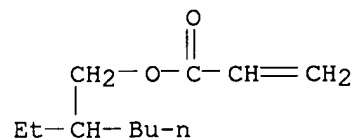
CMF C21 H35 N3 O6



CM 3

CRN 103-11-7

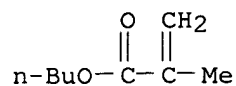
CMF C11 H20 O2



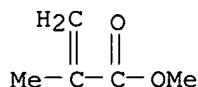
CM 4

CRN 97-88-1

CMF C8 H14 O2



CM 5

CRN 80-62-6  
CMF C5 H8 O2

L60 ANSWER 32 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1995:851690 HCAPLUS

DN 123:259894

TI Waterborne crosslinkable coatings using polyoxyalkylene polyamine crosslinked acetoacetate functional binder

IN Serelis, Algirdas Kazimieras; Meekings, Craig David

PA ICI Australia Operations Proprietary Ltd., Australia

SO PCT Int. Appl., 26 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 9509209	A1	19950406	WO 1994-AU599	19940929	
	W:			AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, US, UZ		
	RW:			KE, MW, SD, SZ, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG		
	ZA 9407536	A	19950526	ZA 1994-7536	19940927	
	AU 9478048	A1	19950418	AU 1994-78048	19940929	
	AU 678297	B2	19970522			
PRAI	AU 1993-1525		19930929			
	WO 1994-AU599		19940929			
AB	The title coating compns., suitable for use as a glossy or semi-gloss paint, have as the binder a combination of an aqueous film-forming dispersion of addition polymer having acetoacetate functional groups, or two dispersion polymers of different glass transition temps., and a water-stable polyoxyalkylene polyamine crosslinking agent having ≥2 primary amine group with acetoacetate functional groups/primary amine groups mol ratio 1-40:4-1. A semi-gloss white paint containing acetoacetoxyethyl methacrylate-Bu methacrylate-Me methacrylate <b>copolymer</b> was formulated with Jeffamine ED 600, applied to polypropylene panels, and dried 1 wk at room temperature to give coated panels having good solvent resistance (xylene double rubs ≥200).					
IC	ICM C09D133-08					
	ICS C09D133-10; C09D133-12; C09D201-06; C08F246-00					
CC	42-3 (Coatings, Inks, and Related Products)					
ST	polyoxyalkylene polyamine crosslinker acetoacetoxyethyl methacrylate <b>copolymer</b> ; waterborne polyoxyalkylene polyamine crosslinkable coating					
IT	Coating materials					

(paints, water-thinned, glossy; waterborne crosslinkable coatings using **polyoxyalkylene polyamine** crosslinked acetoacetate functional binder)

IT 168898-20-2P **168898-21-3P** 169274-66-2P 169274-67-3P  
169274-68-4P 169274-69-5P

RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM  
(Technical or engineered material use); **PREP (Preparation)**; USES  
(Uses)

(waterborne crosslinkable coatings using **polyoxyalkylene polyamine** crosslinked acetoacetate functional binder)

IT **168898-21-3P**

RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM  
(Technical or engineered material use); **PREP (Preparation)**; USES  
(Uses)

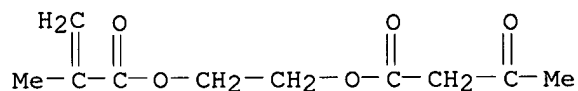
(waterborne crosslinkable coatings using **polyoxyalkylene polyamine** crosslinked acetoacetate functional binder)

RN 168898-21-3 HCAPLUS

CN Butanoic acid, 3-oxo-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine, butyl 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

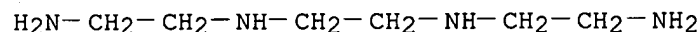
CM 1

CRN 21282-97-3  
CMF C10 H14 O5



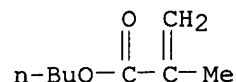
CM 2

CRN 112-24-3  
CMF C6 H18 N4



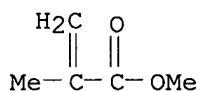
CM 3

CRN 97-88-1  
CMF C8 H14 O2



CM 4

CRN 80-62-6  
CMF C5 H8 O2



L60 ANSWER 33 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1995:798751 HCAPLUS

DN 123:294710

TI The study on synthesis and application of polymer dispersion for **cement** modifier - the waterproofing effect of **cement** mortar by poly[DMA-co-DAMA] emulsion -

AU Kim, Young-Geun; Herh, Dong-Seop; Park, Hong-Soo

CS Korea Institute Construction Materials, Kwachon, 427-010, S. Korea

SO Kongop Hwahak (1994), 5(4), 669-80

CODEN: KOHWE9; ISSN: 1225-0112

PB Korean Society of Industrial and Engineering Chemistry

DT Journal

LA Korean

AB DMA-co-DAMA were synthesized from 2-diethylaminoethyl methacrylate and dodecyl-methacrylate containing long chain hydrocarbon group with hydrophilic and hydrophobic radicals. To facilitate water emulsification, acrylic copolymer was cationized by acetic acid to produce acetated acrylic copolymer. The structures of the synthesized copolymer and acetated copolymers were confirmed by IR, NMR, and mol. weight was measured by GPC, and C. H. N elemental anal. Acetated acrylic copolymers were perfectly emulsified in water and showed increased emulsion stability. Polymer dispersion for **cement** modifier(PDCM-PDD) was prepared by blending of the quaternized acrylic copolymer synthesized above, sodium silicate, sodium gluconate, oleic acid, and triethanol amine. The result with prepared polymer dispersion of **cement** modifier was examined, and it was found that excellent waterproofing effect; Water permeability ratio is 0.44 under the water pressure of 100g/cm<sup>2</sup> and 0.55 under 3kg/cm<sup>2</sup>, and water absorption ratio is 0.36.apprx.0.47 and 1.02 compressive strength ratio at mixed ratio of water/PDCM-PDD is 45 times.

CC 58-1 (Cement, Concrete, and Related Building Materials)

Section cross-reference(s): 38

ST acrylic polymer dispersion prepn waterproofing **cement**

IT **Cement**

Mortar

(synthesis of 2-diethylaminoethyl methacrylate-dodecylmethacrylate copolymer and use as waterproofing agent for **cement** mortar)

IT Waterproofing

(agents, synthesis of 2-diethylaminoethyl methacrylate-dodecylmethacrylate copolymer and use as waterproofing agent for **cement** mortar)

IT 167968-84-5P

RL: MOA (Modifier or additive use); NUU (Other use, unclassified);

SPN (Synthetic preparation); PREP (Preparation); USES

(Uses)

(waterproofing agent; synthesis of 2-diethylaminoethyl methacrylate-dodecylmethacrylate copolymer and use as waterproofing agent for **cement** mortar)

IT 167968-84-5P

RL: MOA (Modifier or additive use); NUU (Other use, unclassified);

SPN (Synthetic preparation); PREP (Preparation); USES

(Uses)

(waterproofing agent; synthesis of 2-diethylaminoethyl methacrylate-dodecylmethacrylate copolymer and use as waterproofing agent for **cement** mortar)

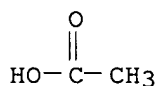
RN 167968-84-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(diethylamino)ethyl ester, polymer with dodecyl 2-methyl-2-propenoate, acetate (9CI) (CA INDEX NAME)

CM 1

CRN 64-19-7

CMF C2 H4 O2



CM 2

CRN 29402-61-7

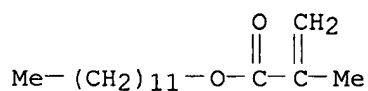
CMF (C16 H30 O2 . C10 H19 N O2)x

CCI PMS

CM 3

CRN 142-90-5

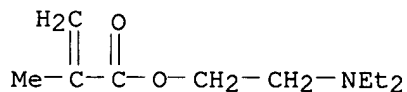
CMF C16 H30 O2



CM 4

CRN 105-16-8

CMF C10 H19 N O2



L60 ANSWER 34 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1995:542749 HCAPLUS

DN 123:121161

TI The study on synthesis and application of polymer dispersion for **cement** modifier - the waterproofing effect of poly[DMA-co-DAMA] emulsion



AU Kim, Young-Geun; Lee, Kyong-Woon; Park, Jong-ok; Park, Hong-Soo  
 CS Inst. Ceramic Technol., NITI, Seoul, 152-023, S. Korea  
 SO Yonju Pogo - Kungnip Kongop Kisulwon (1993), 43, 748-67  
 CODEN: YPKKED  
 PB National Industrial Technology Institute  
 DT Journal  
 LA Korean  
 AB Dodecyl methacrylate-2-diethylaminoethyl methacrylate copolymer (dMa-co-DAMA) was synthesized from 2-diethylaminoethyl methacrylate and dodecylmethacrylate containing long chain hydrocarbon group with hydrophile radical and hydrophobic radical. To facilitate water emulsification, acrylic copolymer was cationized by acetic acid to produce acetated acrylic copolymer. The structures of the synthesized copolymer and acetated copolymers were confirmed by IR-NMR, and mol. weight was measured by GPC, and C.H.N. elemental anal. Acetated acrylic copolymers were perfectly emulsified in water and showed increased emulsion stability. Polymer dispersion for **cement** modifier (PDCM-PDD)/were prepared by blending of the quaternized acrylic copolymer synthesized above, sodium silicate, sodium gluconate, oleic acid, and triethanol amine. The result with prepared polymer dispersion of **cement** modifier was examined, and it was found that it had an excellent waterproofing effect; water permeability ratio is 0.44 under the water pressure of 100 g/cm<sup>2</sup>, and 0.55 under 3 kg/cm<sup>2</sup>, and water absorption ratio is 0.36-0.47 and 1.02 compressive strength ratio at mixed ratio of water/PDCM-PDD is 45 times.  
 CC 58-1 (Cement, Concrete, and Related Building Materials)  
 ST copolymer waterproofing agent **cement**; polymer dispersion **cement** waterproofing  
 IT Acrylic polymers, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (acetated, emulsifying agents; preparation, dispersion performance and waterproofing ability of 2-diethylaminoethylmethacrylate-dodecylmethacrylate copolymer in **cement**)  
 IT **Cement**  
 (preparation and waterproofing ability of 2-diethylaminoethylmethacrylate-dodecylmethacrylate copolymer dispersion in **cement**)  
 IT Waterproofing  
 (agents, preparation and waterproofing ability of 2-diethylaminoethylmethacrylate-dodecylmethacrylate copolymer dispersion in **cement**)  
 IT **29402-61-7P**, 2-Diethylaminoethylmethacrylate-dodecylmethacrylate copolymer  
 RL: PRP (Properties); **SPN (Synthetic preparation)**; TEM  
 (Technical or engineered material use); **PREP (Preparation)**; USES  
 (Uses)  
 (dispersing agent; preparation, dispersion performance and waterproofing ability of 2-diethylaminoethylmethacrylate-dodecylmethacrylate copolymer in **cement**)  
 IT 102-71-6, Triethanol amine., uses 112-80-1, Oleic acid, uses 527-07-1, Sodium gluconate 1344-09-8, Sodium silicate  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (waterproofing agent; preparation and waterproofing ability of 2-diethylaminoethylmethacrylate-dodecylmethacrylate copolymer dispersion in **cement**)  
 IT **29402-61-7P**, 2-Diethylaminoethylmethacrylate-dodecylmethacrylate copolymer  
 RL: PRP (Properties); **SPN (Synthetic preparation)**; TEM  
 (Technical or engineered material use); **PREP (Preparation)**; USES  
 (Uses)

(dispersing agent; preparation, dispersion performance and waterproofing ability of 2-diethylaminoethylmethacrylate-dodecylmethacrylate copolymer in **cement**)

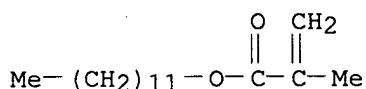
RN 29402-61-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(diethylamino)ethyl ester, polymer with dodecyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 142-90-5

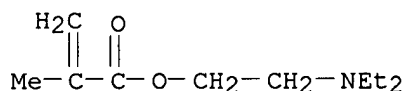
CMF C16 H30 O2



CM 2

CRN 105-16-8

CMF C10 H19 N O2



L60 ANSWER 35 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1994:484833 HCAPLUS

DN 121:84833

TI Homogeneous polymeric ammonium salt and its use

IN Muehlenbernd, Thomas; Vogt, Heinz; Moench, Dietmar; Hahn, Susanne; Telser, Thomas; Kingma, Arend Jouke

PA BASF A.-G., Germany

SO Eur. Pat. Appl., 10 pp.

CODEN: EPXXDW

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 578082	A2	19940112	EP 1993-110226	19930626
	EP 578082	A3	19950104		
	R: BE, DE, ES, FR, GB, IT, NL				
	DE 4222301	A1	19940113	DE 1992-4222301	19920708
PRAI	DE 1992-4222301		19920708		

AB The salt is based on (a) a polyalkylenimine and/or a polyvinyl amine with >3 amino groups/mol. and (b) a co- or terpolymer of C2H4 with an alkene mono- and/or -dicarboxylic acid of anhydride and/or ester. The salt may be used in medium- or high-voltage cable insulation. Thus, on elastomeric salt was prepared by coextruding 60:20:20 C2H4-lenimine. The ionomeric material had a tear strength 25.7 M/mm2.

IC ICM C08L023-08

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 39

ST polyamine **polycarboxylic** ionomer salt; rubber acrylic  
polyethylenimine salt

IT **156659-42-6P**

RL: **PREP (Preparation)**

(rubber, preparation and characterization of)

IT **156659-42-6P**

RL: **PREP (Preparation)**

(rubber, preparation and characterization of)

RN 156659-42-6 HCAPLUS

CN 2-Propenoic acid, polymer with ethene and 2-ethylhexyl 2-propenoate,  
compd. with aziridine homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 26713-20-2

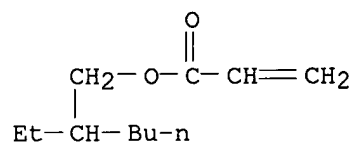
CMF (C11 H20 O2 . C3 H4 O2 . C2 H4)x

CCI PMS

CM 2

CRN 103-11-7

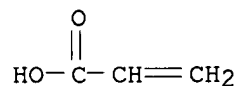
CMF C11 H20 O2



CM 3

CRN 79-10-7

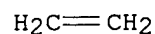
CMF C3 H4 O2



CM 4

CRN 74-85-1

CMF C2 H4



CM 5

CRN 9002-98-6

CMF (C2 H5 N)x  
CCI PMS

CM 6

CRN 151-56-4  
CMF C2 H5 N



L60 ANSWER 36 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN  
AN 1992:430284 HCAPLUS  
DN 117:30284  
TI Metalworking oils containing carboxylic acid compounds  
IN Ozeki, Toshio; Sugioka, Michihiro  
PA Asahi Denka Kogyo K. K., Japan  
SO Jpn. Kokai Tokkyo Koho, 7 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 03294399	A2	19911225	JP 1990-96945	19900412
PRAI	JP 1990-96945		19900412		
AB	The oils contain R[XmOCOR1(CO2H)n]y [R = (partially esterified) polyol residue; R1 = <b>polycarboxylic</b> acid residue; X = oxyethylene, oxypropylene, their mixture group; m = 2-300; n = 1-5; y = 2-6], their alkali metal salts, or their amine salts. The odorless oils have good resistance to putrefaction, degradation, and foaming, and are suitable for use in drawing, cutting, grinding, pressing, etc.				
IC	ICM C10M129-66				
	ICS C10M133-06; C10M145-36				
ICI	C10N010-02, C10N030-00, C10N030-10, C10N030-16, C10N030-18, C10N040-22, C10N040-24				
CC	51-8 (Fossil Fuels, Derivatives, and Related Products) Section cross-reference(s): 55, 56				
IT	52434-09-0P	141386-43-8P	141386-44-9P	<b>141405-40-5P</b>	
	141490-39-3P	141655-86-9P	141655-87-0P	141657-36-5P	141911-30-0P
	141911-31-1P	141911-32-2P	141976-90-1P	<b>141976-91-2P</b>	
	142155-22-4P	142155-23-5P			
	RL: <b>PREP (Preparation)</b> (preparation of, metalworking oils containing, odorless, with good resistance to putrefaction and degradation and foaming)				
IT	<b>141405-40-5P 141976-91-2P</b>				
	RL: <b>PREP (Preparation)</b> (preparation of, metalworking oils containing, odorless, with good resistance to putrefaction and degradation and foaming)				
RN	141405-40-5 HCAPLUS				
CN	Ethanol, 2,2',2''-nitrilotris-, compd. with (Z,Z,Z)- $\alpha,\alpha'$ -[1- [[ (1-oxo-9-octadecenyl)oxy]methyl]-1,2-ethanediyl]bis[ $\omega$ -[(3-carboxy-				

1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] (1:1) (9CI) (CA INDEX NAME)

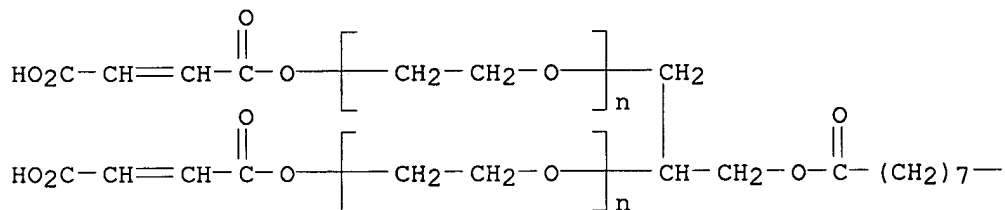
CM 1

CRN 141386-43-8

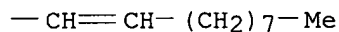
CMF (C2 H4 O)n (C2 H4 O)n C29 H44 O10

CCI PMS

PAGE 1-A



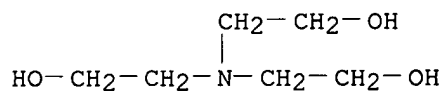
PAGE 1-B



CM 2

CRN 102-71-6

CMF C6 H15 N O3



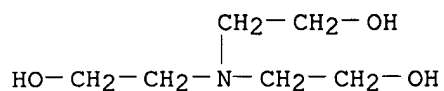
RN 141976-91-2 HCAPLUS

CN Ethanol, 2,2',2''-nitrilotris-, compd. with methyloxirane polymer with oxirane, ether with 1,2,3-propanetriol (3:1), tris[(Z)-hydrogen 2-butenedioate] (9CI) (CA INDEX NAME)

CM 1

CRN 102-71-6

CMF C6 H15 N O3



CM 2

CRN 52434-09-0

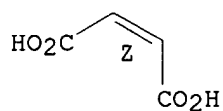
CMF C4 H4 O4 . 1/3 C3 H8 O3 . (C3 H6 O . C2 H4 O) x

CM 3

CRN 110-16-7

CMF C4 H4 O4

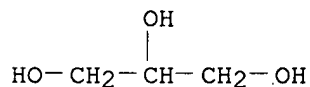
Double bond geometry as shown.



CM 4

CRN 56-81-5

CMF C3 H8 O3



CM 5

CRN 9003-11-6

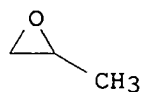
CMF (C3 H6 O . C2 H4 O) x

CCI PMS

CM 6

CRN 75-56-9

CMF C3 H6 O



CM 7

CRN 75-21-8  
CMF C2 H4 O



L60 ANSWER 37 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1991:248565 HCAPLUS

DN 114:248565

TI Aqueous dispersions of synthetic polymers with increased frost resistance

IN Stepita, Matej

PA Czech.

SO Czech., 4 pp.

CODEN: CZXXA9

DT Patent

LA Czech

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CS 268437	B1	19900314	CS 1987-8873	19871207
PRAI	CS 1987-8873		19871207		

AB The title dispersions, useful as coatings, hydroinsulating compds. and for polymer-**cement** blends, based on copolymers of vinyl chloride and/or styrene with acrylic acid esters and 3-20% (meth)acrylic acid comonomers, contain mono-, di-, triethylamine, morpholine (I) or I derivs., cyclo- or dicyclohexylamine and/or mono-, di-, triethanolamine or diethylaminoethanol (II) to form the alkanolamine salt. Thus, 100 parts 45:52:3 aqueous dispersion of styrene:Bu acrylate:acrylic acid was homogenized and neutralized with 3.6 parts II at 20° for 30 min to give a dispersion having viscosity 520 mPa-s/20°, frost resistance 23°, min. film-forming temperature (MFT) 5°, absorption in water 12.7%/24 h, and elongation 780% compared with 320, 6, 15, 24.9 and 490, resp., for dispersion without addition of II.

IC ICM C08L033-02

ICA C09D005-02

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 38, 42, 58

ST styrene copolymer salt coating; acrylic acid copolymer salt coating; acrylate copolymer salt coating; amine neutralized acrylic acid copolymer; **cement** polymer compn; frost resistance acrylic polymer dispersion

IT **Cement**

(blends with amine-neutralized (meth)acrylic acid-alkyl acrylate copolymers, for frost resistance)

IT 134042-90-3P **134042-91-4P**

RL: **PREP (Preparation)**

(aqueous dispersions, preparation of, for frost-resistant coatings)

IT **134042-91-4P**

RL: **PREP (Preparation)**

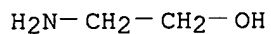
(aqueous dispersions, preparation of, for frost-resistant coatings)

RN 134042-91-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with chloroethene and ethyl 2-propenoate, compd. with 2-aminoethanol and N,N-diethylethanamine (9CI) (CA INDEX NAME)

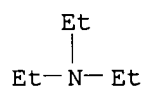
CM 1

CRN 141-43-5  
CMF C2 H7 N O



CM 2

CRN 121-44-8  
CMF C6 H15 N

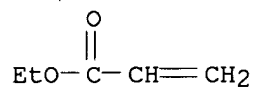


CM 3

CRN 117647-16-2  
CMF (C5 H8 O2 . C4 H6 O2 . C2 H3 Cl)x  
CCI PMS

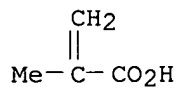
CM 4

CRN 140-88-5  
CMF C5 H8 O2



CM 5

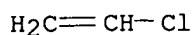
CRN 79-41-4  
CMF C4 H6 O2



CM 6

CRN 75-01-4  
CMF C2 H3 Cl

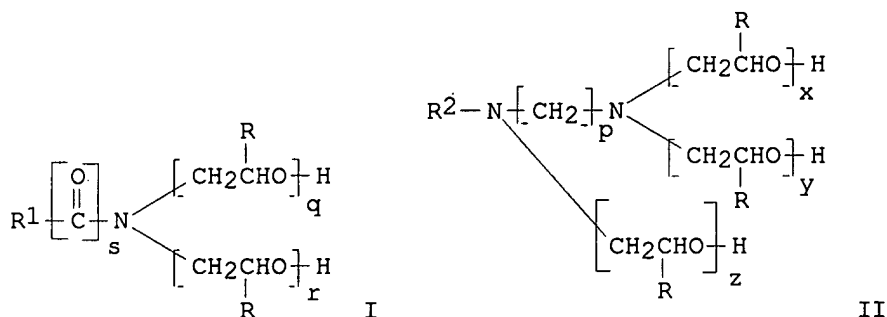




L60 ANSWER 38 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN  
 AN 1990:554356 HCAPLUS  
 DN 113:154356  
 TI Oligomeric thixotropic agents and nonaqueous coatings containing them  
 IN Yun, Han Bo; Smith, Alan  
 PA Kronos International, Inc., USA  
 SO Eur. Pat. Appl., 38 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 355712	A2	19900228	EP 1989-115181	19890817
	EP 355712	A3	19920115		
	EP 355712	B1	19940727		
	R: BE, CH, DE, ES, FR, GB, IT, LI, LU, NL				
	CA 1335291	A1	19950418	CA 1989-606696	19890726
	WO 9002121	A1	19900308	WO 1989-US3594	19890824
	W: BR, JP, KR, SE				
	JP 04506527	T2	19921112	JP 1989-509065	19890824
	JP 2634269	B2	19970723		
	US 5034444	A	19910723	US 1990-539545	19900618
	SE 9100543	A	19910225	SE 1991-543	19910225
	SE 465725	B	19911021		
	SE 465725	C	19920213		
PRAI	US 1988-236990		19880826		
	WO 1989-US3594		19890824		

GI



AB Pourable liquid title agents can be added at any stage of paint processing to impart good storage stability and sag resistance with only minimal effects on gloss of a paint. They are compatible with a wide range of polyester, acrylic, and alkyd resin systems, and are especially useful for high-solids coatings. They comprise reaction products of **polycarboxylic** acids or anhydrides with alkoxyated aliphatic N compds. I and/or II (R = H, Me, Et; R1-2 = C6-30 alkyl; p = 1-20; q, r  $\geq 1$ , q + r = 2-50; s = 0-1; x + y + z = 1-50), of

**polycarboxylic acids** or anhydrides with diamines  $R_3NH(CH_2)_pNH_2$  ( $R_3 = C_6-30$  alkyl;  $p = 1-20$ ), of I and/or II with alkanediol polyepoxide ethers, and/or of  $R_3NH(CH_2)_pNH_2$  with alkanediol polyepoxide ethers. Thus, a high-solids Aroplaz 6755-A6-80 (polyester resin) paint containing Cymel 303 (melamine resin hardener),  $TiO_2$ , and 3.0 lb/100 gal reaction product (III) of 1.0 mol maleic anhydride with 2.0 mol Ethomeon C 20 (ethoxylated coco amine) showed viscosity 570 cP, thixotropy index 1.33, and no sagging when coats up to 7.0 mils thick were applied to inclined surfaces and baked, vs. 301 cP, 0.81, and 3.5 mils without the III, or 410 cP, 0.85, and 4.0 mils using fumed silica instead of III.

IC ICM C09D007-12

CC 42-5 (Coatings, Inks, and Related Products)

IT 88-99-3DP, 1,2-Benzenedicarboxylic acid, polymers with diamines or alkoxyated diamines 89-32-7DP, polymers with alkoxyated diamines 105-60-2DP, polymers with maleic anhydride and (alkoxyated)diamines 108-31-6DP, 2,5-Furandione, polymers with diamines or alkoxyated diamines 109-76-2DP, 1,3-Propanediamine, N-fatty alkyl derivs., polymers with dicarboxylic acids or anhydrides or epoxy resins 110-16-7DP, 2-Butenedioic acid (Z)-, polymers with ethoxylated fatty amines 693-23-2DP, Dodecanedioic acid, polymers with ethoxylated fatty amines 2421-28-5DP, polymers with alkoxyated diamines 13281-06-6DP, polymers with dicarboxylic acid anhydrides and ethoxylated fatty amines 26635-92-7DP, Ethomeen 18/12, polymers with dicarboxylic acid anhydrides and ethoxylated fatty amines 73003-90-4DP, polymers with alkoxyated diamines 129613-04-3P 129613-05-4P 129613-06-5P **129613-07-6P** 129613-08-7P **129613-09-8P** 129645-06-3P

RL: **PREP (Preparation)**

(oligomeric, manufacture of, as thixotropic agents for nonaq. coatings)

IT **129613-07-6P 129613-09-8P**

RL: **PREP (Preparation)**

(oligomeric, manufacture of, as thixotropic agents for nonaq. coatings)

RN 129613-07-6 HCAPLUS

CN 2,5-Furandione, polymer with N-(2-ethylhexyl)-1,3-propanediamine and  $\alpha, \alpha'$ -[(octadecylimino)di-2,1-ethanediyl]bis[ $\omega$ -hydroxypoly(oxy-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

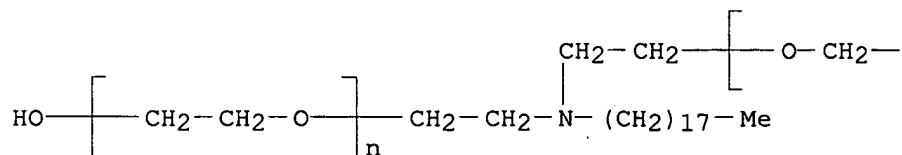
CM 1

CRN 26635-92-7

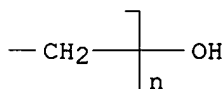
CMF (C2 H4 O)<sub>n</sub> (C2 H4 O)<sub>n</sub> C22 H47 N O2

CCI PMS

PAGE 1-A

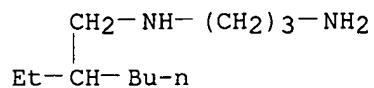


PAGE 1-B



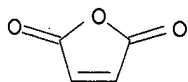
CM 2

CRN 13281-06-6  
CMF C11 H26 N2



CM 3

CRN 108-31-6  
CMF C4 H2 O3

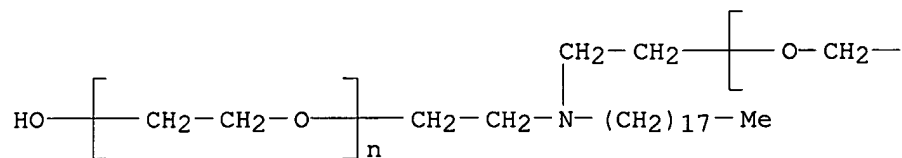


RN 129613-09-8 HCAPLUS  
CN 2-Butenedioic acid (2Z)-, polymer with  $\alpha,\alpha'$ -  
[(octadecylimino)di-2,1-ethanediyl]bis[ $\omega$ -hydroxypoly(oxy-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

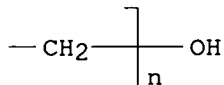
CM 1

CRN 26635-92-7  
CMF (C2 H4 O)<sub>n</sub> (C2 H4 O)<sub>n</sub> C22 H47 N O2  
CCI PMS

PAGE 1-A



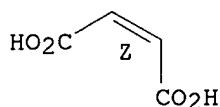
PAGE 1-B



CM 2

CRN 110-16-7  
CMF C4 H4 O4

Double bond geometry as shown.



L60 ANSWER 39 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1990:36787 HCAPLUS

DN 112:36787

TI Sulfo group-containing polyesters as plasticizers for **cement** and plaster of paris and lime

IN Wahle, Bernd; Anzinger, Hermann; Ziche, Horst; Schinski, Erhard

PA Henkel K.-G.a.A., Fed. Rep. Ger.

SO Ger. Offen., 6 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3743413	A1	19890629	DE 1987-3743413	19871221
	EP 321818	A2	19890628	EP 1988-120706	19881212
	EP 321818	A3	19901017		

R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE

US 4880898 A 19891114 US 1988-287354 19881220

PRAI DE 1987-3743413 19871221

AB The title polyesters, which help to maintain the fluidity of **cement** and plaster of paris and lime, are prepared by the condensation polymerization of fatty acid amides  $\text{RCON}(\text{C}_k\text{H}_{2k}\text{OH})_2$  ( $\text{RCO} = \text{C}_8\text{-22}$  fatty acid residue;  $k = 2, 3$ ), dialkanolamino-polyglycolates  $\text{RCO}(\text{OC}_m\text{H}_{2m})_n\text{N}(\text{C}_k\text{H}_{2k}\text{OH})_2$  ( $m = 2$  and/or  $3$ ;  $n = 1\text{-}10$ ), or dialkanolammoniumalkyl-polyglycolates  $\text{RCO}(\text{OC}_m\text{H}_{2m})_n\text{N}^+(\text{C}_k\text{H}_{2k}\text{OH})_2\text{R}_1\text{X}^-$  ( $\text{R}_1 = \text{C}_1\text{-4 alkyl}$ ;  $\text{X} = \text{alkylation agent anion}$ ), with maleic anhydride to acid value  $\leq 20$ , and then are reacted with sulfites. Thus, 1 mol of lauric acid diethanolamine amide was polymerized with 1 mol maleic anhydride in xylene at  $150\text{-}160^\circ$  for 6 h and the polyester reacted with 0.5 mol  $\text{Na}_2\text{S}_2\text{O}_5$  to produce a title sulfo group-containing polyester.

IC ICM C08G063-76

ICS C08G063-68; C04B028-02; C04B028-14; C04B024-30

ICA C08G063-52

ICI C04B028-02, C04B024-30; C04B028-14, C04B024-30

CC 35-5 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 58

ST sulfonated polyester **cement** plasticizer; plaster paris  
sulfonated polyester plasticizer; lime plasticizer sulfonated polyester;  
maleic anhydride based polyester plasticizer

IT **Cement**

Lime (chemical)

RL: USES (Uses)

(plasticizers for, sulfo group-containing polyesters as)

IT Plasticizers

(sulfo group-containing polyesters, for **cement** or plaster of paris or lime)

IT Amides, polymers

RL: PROC (Process)  
(C8-22, N,N-bis(hydroxyalkyl), polymers, with maleic anhydride, reaction products with sulfites, manufacture of, as plasticizers for **cement** and plaster of paris and lime)

IT Polyesters, preparation

RL: IMF (Industrial manufacture); PREP (Preparation)  
(sulfo-containing, manufacture of, as plasticizers for **cement** or plaster of paris or lime)

IT 74-87-3DP, Methyl chloride, quaternization products with ethoxylated lauric and myristic acid diethanolamides, polymers with maleic anhydride, reaction products with sodium disulfite 75-21-8DP, Ethylene oxide, reaction products with lauric acid and myristic acid diethanolamide, polymers with maleic anhydride, reaction products with sodium disulfite 7681-57-4DP, Sodium disulfite, reaction products with maleic anhydride-based polyesters **124767-08-4DP**, Lauric acid diethanolamide-maleic anhydride-myristic acid diethanolamide copolymer, reaction products with sodium disulfite **124767-09-5DP**, reaction products with sodium disulfite

RL: **IMF (Industrial manufacture); PREP (Preparation)**  
(manufacture of, as plasticizers for **cement** or plaster of paris or lime)

IT **124767-08-4DP**, Lauric acid diethanolamide-maleic anhydride-myristic acid diethanolamide copolymer, reaction products with sodium disulfite **124767-09-5DP**, reaction products with sodium disulfite

RL: **IMF (Industrial manufacture); PREP (Preparation)**  
(manufacture of, as plasticizers for **cement** or plaster of paris or lime)

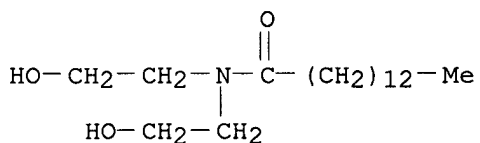
RN 124767-08-4 HCAPLUS

CN Tetradecanamide, N,N-bis(2-hydroxyethyl)-, polymer with N,N-bis(2-hydroxyethyl)dodecanamide and 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 7545-23-5

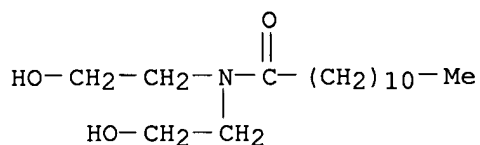
CMF C18 H37 N O3



CM 2

CRN 120-40-1

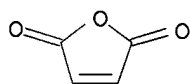
CMF C16 H33 N O3



CM 3

CRN 108-31-6

CMF C4 H2 O3



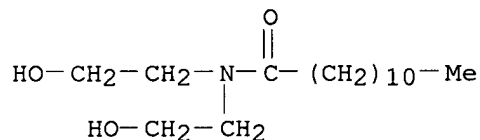
RN 124767-09-5 HCAPLUS

CN Dodecanamide, N,N-bis(2-hydroxyethyl)-, polymer with 2,5-furandione (9CI)  
(CA INDEX NAME)

CM 1

CRN 120-40-1

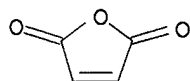
CMF C16 H33 N O3



CM 2

CRN 108-31-6

CMF C4 H2 O3



L60 ANSWER 40 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1987:637535 HCAPLUS

DN 107:237535

TI Water-soluble film or sheet

IN Fujita, Takeshi; Mori, Shigeo; Kataoka, Hironori; Taniuchi, Akira

PA Daiichi Kogyo Seiyaku Co., Ltd., Japan

SO U.S., 9 pp. Cont.-in-part of U.S. Ser. No. 476,155.

CODEN: USXXAM

DT Patent  
LA English  
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4528360	A	19850709	US 1984-651486	19840917
	JP 58160316	A2	19830922	JP 1982-43340	19820317
	JP 58179227	A2	19831020	JP 1982-62164	19820413
	JP 05068493	B4	19930929		
	US 4521586	A	19850604	US 1983-476155	19830317
	JP 04356526	A2	19921210	JP 1991-257726	19911004
	JP 06041511	B4	19940601		

PRAI JP 1982-43340 19820317  
JP 1982-62164 19820413  
US 1983-476155 19830317

AB Film-formable, water-soluble polyesters of mol. weight  $\geq 50,000$  are manufactured by polycondensation of a **polycarboxylic** acid, its anhydride, or its low-mol.-weight ester with a polyoxyalkylene of average mol. weight  $\geq 3000$  prepared by polycondensation of ethylene oxide (I) and optionally, another alkylene oxide with an organic compound having  $\geq 2$  active H's. Thus, 106 parts diethylene glycol and 20 parts KOH were gradually treated with 12,000 parts I at  $130^\circ$  and 2 kg/cm<sup>2</sup>-G to give a polyol having weight-average mol. weight .apprx.10,000. The polyol (100 parts) was treated with 1.85 parts di-Me terephthalate and heated to  $120^\circ$  while distilling MeOH to give a copolymer (II) having weight-average mol. weight .apprx.200,000. II was dissolved in water, and 100 g of the aqueous solution

was evaporated in a dish to give a film having elongation 10.4%, tensile strength 150 kg/cm<sup>2</sup>, and tear strength 80 kg/cm.

IC ICM C08G063-42  
ICS C08G063-66; C08G059-00

NCL 528297000

CC 35-5 (Chemistry of Synthetic High Polymers)  
Section cross-reference(s): 37

IT Polyesters, preparation

RL: IMF (Industrial manufacture); PREP (Preparation)  
(manufacture of, from polyether polyols and **polycarboxylic** acid derivs.)

IT 75-21-8DP, polymers with alkylene oxides and active H-containing compds. and dicarboxylic acid derivs. 75-56-9DP, polymers with alkylene oxides and active H-containing compds. and dicarboxylic acid derivs. 89-32-7DP, reaction products with polyethylenimine-ethylene oxide-propylene oxide adduct 112-57-2DP, ethers with ethylene oxide-propylene copolymers, polymers with di-Me phthalate 120-61-6DP, reaction products with polyethylenimine-ethylene oxide-propylene oxide adduct 131-11-3DP, polymers with tetraethylenepentamine-alkylene oxide reaction products 141-03-7DP, reaction products with polyethylenimine-ethylene oxide adduct 629-11-8DP, polymers with alkylene oxides and dimer acids 9002-98-6DP, reaction products with alkylene oxides and dicarboxylic acid derivs. 9003-11-6DP, ethers with tetraethylenepentamine, polymers with di-Me phthalate 25190-06-1DP, reaction products with ethylene oxide and dimer acids 34937-03-6P 35725-54-3P 37294-00-1P 88077-38-7P  
88077-39-8P 88077-40-1P 88077-41-2P 88077-42-3P 88077-44-5P  
88077-45-6P **88077-46-7P** 88077-47-8P 88077-48-9P  
88077-49-0P 88077-50-3P **88077-51-4P** 88077-54-7P  
88077-81-0P 88077-82-1P 88077-83-2P 88077-84-3P 88077-85-4P  
88091-62-7P 88169-05-5P 88169-06-6P 88169-07-7P 88248-43-5P  
88248-48-0P 95039-05-7P 99651-95-3P 99651-96-4P 99651-97-5P

99692-53-2P 115775-36-5P

RL: **PREP (Preparation)**

(manufacture of film-formable water-soluble, with high mol. weight)

IT **88077-46-7P 88077-51-4P**

RL: **PREP (Preparation)**

(manufacture of film-formable water-soluble, with high mol. weight)

RN 88077-46-7 HCAPLUS

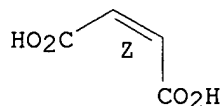
CN 2-Butenedioic acid (2Z)-, polymer with methyloxirane polymer with oxirane ether with 2,2'-iminobis[ethanol] (2:1) (9CI) (CA INDEX NAME)

CM 1

CRN 110-16-7

CMF C4 H4 O4

Double bond geometry as shown.



CM 2

CRN 79805-70-2

CMF C4 H11 N O2 . 2 (C3 H6 O . C2 H4 O)x

CM 3

CRN 111-42-2

CMF C4 H11 N O2



CM 4

CRN 9003-11-6

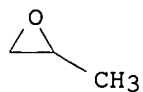
CMF (C3 H6 O . C2 H4 O)x

CCI PMS

CM 5

CRN 75-56-9

CMF C3 H6 O



CM 6



CRN 75-21-8  
CMF C2 H4 O

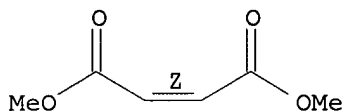


RN 88077-51-4 HCAPLUS  
CN 2-Butenedioic acid (2Z)-, dimethyl ester, polymer with methyloxirane  
polymer with oxirane ether with 2,2'-iminobis[ethanol] (2:1) (9CI) (CA  
INDEX NAME)

CM 1

CRN 624-48-6  
CMF C6 H8 O4

Double bond geometry as shown.



CM 2

CRN 79805-70-2  
CMF C4 H11 N O2 . 2 (C3 H6 O . C2 H4 O)x

CM 3

CRN 111-42-2  
CMF C4 H11 N O2

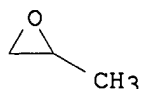


CM 4

CRN 9003-11-6  
CMF (C3 H6 O . C2 H4 O)x  
CCI PMS

CM 5

CRN 75-56-9  
CMF C3 H6 O



CM 6

CRN 75-21-8

CMF C2 H4 O



L60 ANSWER 41 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN  
 AN 1984:456564 HCAPLUS  
 DN 101:56564  
 TI Comb copolymers with polyoxyalkylene and carboxylate salt side chains  
 IN Tsubakimoto, Tsuneo; Hosoidi, Masahiro; Tahara, Hideyuki  
 PA Nippon Shokubai Kagaku Kogyo Co., Ltd., Japan  
 SO Eur. Pat. Appl., 56 pp.  
 CODEN: EPXXDW

DT Patent  
 LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 56627	A2	19820728	EP 1982-100247	19820115
	EP 56627	A3	19820804		
	EP 56627	B1	19841003		
	R: DE, FR, GB, IT				
	JP 57118058	A2	19820722	JP 1981-3776	19810116
	JP 58038380	B4	19830823		
	JP 57119896	A2	19820726	JP 1981-5913	19810120
	JP 59016519	B4	19840416		
	JP 58032051	A2	19830224	JP 1981-95928	19810623
	JP 58038381	B4	19830823		
	JP 58006295	A2	19830113	JP 1981-101353	19810701
	JP 59014277	B4	19840403		
	US 4471100	A	19840911	US 1982-339640	19820115
PRAI	JP 1981-3776		19810116		
	JP 1981-5913		19810120		
	JP 1981-95928		19810623		
	JP 1981-101353		19810701		

AB Title copolymers, useful as dispersing agents for **cement** in concrete and mortar and for pigments in paints and as scale inhibitors in water, are manufactured by polymerization of polyalkylene glycol monoallyl ether  
 25-75, maleic monomer 25-75, and a copolymerizable vinyl monomer 0-50 mol, followed by neutralization with alkali or alkaline earth metal hydroxides, ammonia, or amines. Thus, adding maleic anhydride 139.3, (NH<sub>4</sub>)<sub>2</sub>S<sub>2</sub>O<sub>8</sub> 14.2, and water 225 parts to 334 parts polyethylene glycol monoallyl ether (average d.p. 5) and 100 parts water in 120 min under N at 95° with

stirring, adding 4.2 parts 20% aqueous (NH<sub>4</sub>)<sub>2</sub>S<sub>2</sub>O<sub>8</sub> in 20 min, holding the reaction mixture at 95° for 100 min, and neutralizing with 28% aqueous NH<sub>4</sub>OH gave 44% solids copolymer salt (I) [91070-72-3] solution with pH 8.0 and viscosity 93 cP. A paste containing 24% I solution 29.9, water 90.8,

## Emulgen

909 wetting agent 7.1, ethylene oxide 158.5, TiO<sub>2</sub> 871.2, and Cellosize QP-4400 thickener 36.0 parts was mixed (68.9 parts) with 100 parts Acryset EMN-210E [91196-08-6] acrylic polymer emulsion and 6.5 parts CS-12 film-forming additive to give a paint with viscosities 1714 and 1754 cP immediately after and 1 day after preparation, resp., compared with 3540 and 4490, resp., for a similar paint containing Tamol 731 (diisobutylene-maleic anhydride copolymer Na salt) instead of I.

IC C08F216-14; C08F222-00; C04B013-24; C09D007-02; C02F005-00

ICI C08F216-14, C08F222-00; C08F222-00, C08F216-14

CC 42-7 (Coatings, Inks, and Related Products)

Section cross-reference(s): 35, 58, 61

ST polyoxyalkylene allyl ether maleate copolymer; polyoxyethylene allyl ether maleate copolymer; dispersant polyoxyethylene allyl maleate copolymer; **cement** dispersant maleate copolymer; concrete dispersant maleate copolymer; mortar dispersant maleate copolymer; pigment dispersant maleate copolymer; acrylic paint dispersant

IT **Cement**

(dispersing agents for, in concrete and mortar, polyethylene glycol allyl ether-maleic copolymer salts as)

IT 84154-79-0P 90819-16-2P 91068-65-4P 91070-72-3P 91070-73-4P  
91070-75-6P **91070-76-7P**

RL: **PREP (Preparation)**

(dispersing agents, manufacture of)

IT **91070-76-7P**

RL: **PREP (Preparation)**

(dispersing agents, manufacture of)

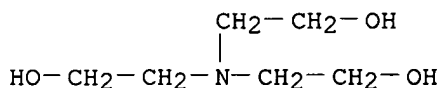
RN 91070-76-7 HCAPLUS

CN 2-Butenedioic acid (2Z)-, monomethyl ester, polymer with  
α-2-propenyl-ω-hydroxypoly(oxy-1,2-ethanediyl), compd. with  
2,2',2''-nitrilotris[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 102-71-6

CMF C6 H15 N O3



CM 2

CRN 82940-71-4

CMF (C4 H4 O4) . (C2 H4 O)n C3 H6 O)x

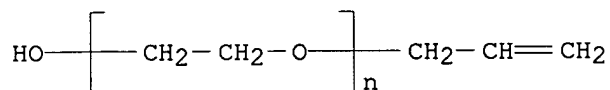
CCI PMS

CM 3

CRN . 27274-31-3

CMF (C2 H4 O)n C3 H6 O

CCI PMS

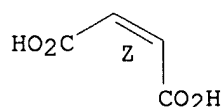


CM 4

CRN 110-16-7

CMF C4 H4 O4

Double bond geometry as shown.



L60 ANSWER 42 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1984:86314 HCAPLUS

DN 100:86314

TI High-molecular-weight compounds

IN Fujita, Takeshi; Mori, Shigeo; Kataoka, Hironori; Taniuchi, Akira

PA Daiichi Kogyo Seiyaku Co., Ltd. , Japan

SO Eur. Pat. Appl., 26 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 89038	A1	19830921	EP 1983-102461	19830312
	EP 89038	B1	19860917		
	R: DE, FR, GB, NL				
	JP 58160316	A2	19830922	JP 1982-43340	19820317
	JP 58179227	A2	19831020	JP 1982-62164	19820413
	JP 05068493	B4	19930929		
	JP 04356526	A2	19921210	JP 1991-257726	19911004
	JP 06041511	B4	19940601		
PRAI	JP 1982-43340		19820317		
	JP 1982-62164		19820413		

AB High-mol.-weight polyesters are prepared by addition polymerizing ethylene oxide

optionally containing an alkylene oxide with an organic compound containing  $\geq 2$  active H groups to produce a polyhydroxy compound having average mol. weight  $\geq 1000$  which is then esterified with a **polycarboxylic** acid, anhydride, or lower alkyl ester. Thus, 106 part diethylene glycol and 20 parts KOH were gradually treated with 12,000 parts ethylene oxide at  $130^\circ$  and 2 kg/cm<sup>2</sup>-G to give a polyol having weight-average mol. weight 10,000. The polyol (100 parts) was treated with 1.85 parts di-Me terephthalate and heated to  $120^\circ$  while distilling MeOH to give a polyester [88077-81-0] having weight-average mol. weight apprx.200,000. The polymer was dissolved in water and 100 g of the aqueous solution was placed in

a

dish and evaporated to give a film having elongation 10.0%, tensile strength 150 kg/cm<sup>2</sup>, and tear strength 80 kg/cm.

IC C08G063-66

CC 35-5 (Chemistry of Synthetic High Polymers)

IT Polyesters, preparation

RL: PREP (Preparation)

(preparation of, from polyether polyols and **polycarboxylic acids**)

IT 75-21-8DP, reaction products with alkylene oxides and polyethylenimine, polymers with dicarboxylic acids 75-56-9DP, reaction products with alkylene oxides and polyethylenimine, polymers with dicarboxylic acids 89-05-4DP, polymers with alkylene oxide-phenolic resin reaction products 89-32-7DP, polymers with alkylene oxide-polyethylenimine reaction products 112-57-2DP, ethers with ethylene oxide-propylene oxide copolymers, polymers with di-Me phthalate 120-61-6DP, polymers with polyethylenimine-alkylene oxide reaction products 141-03-7DP, polymers with alkylene oxide-polyethylenimine reaction products 624-48-6DP, polymers with ethylene oxide-propylene oxide copolymer tetraethylenepentamine ethers 9002-98-6DP, reaction products with alkylene oxides, polymers with dicarboxylic acids 9003-11-6DP, ethers with tetraethylenepentamine, polymers with di-Me phthalate 26249-20-7DP, reaction products with alkylene oxides and polyethylenimine, polymers with dicarboxylic acids 34937-03-6P 35725-54-3P 37294-00-1P 72270-44-1DP, polyesters with fatty acids 88077-38-7P 88077-39-8P 88077-40-1P 88077-41-2P 88077-42-3P 88077-43-4P 88077-44-5P 88077-45-6P **88077-46-7P** 88077-47-8P 88077-48-9P 88077-49-0P 88077-50-3P **88077-51-4P** 88077-53-6P 88077-54-7P 88077-81-0P 88077-82-1P 88077-83-2P 88077-84-3P 88077-85-4P 88091-62-7P 88169-05-5P 88169-06-6P 88169-07-7P 88248-41-3P 88248-43-5P 88248-48-0P

RL: **PREP (Preparation)**

(preparation of high-mol.-weight moldable)

IT **88077-46-7P 88077-51-4P**

RL: **PREP (Preparation)**

(preparation of high-mol.-weight moldable)

RN 88077-46-7 HCAPLUS

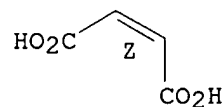
CN 2-Butenedioic acid (2Z)-, polymer with methyloxirane polymer with oxirane ether with 2,2'-iminobis[ethanol] (2:1) (9CI) (CA INDEX NAME)

CM 1

CRN 110-16-7

CMF C4 H4 O4

Double bond geometry as shown.



CM 2

CRN 79805-70-2

CMF C4 H11 N O2 . 2 (C3 H6 O . C2 H4 O)x

CM 3

CRN 111-42-2  
CMF C4 H11 N O2

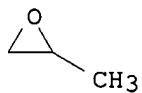


CM 4

CRN 9003-11-6  
CMF (C3 H6 O . C2 H4 O)x  
CCI PMS

CM 5

CRN 75-56-9  
CMF C3 H6 O



CM 6

CRN 75-21-8  
CMF C2 H4 O

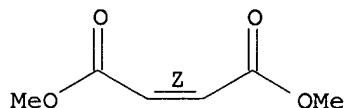


RN 88077-51-4 HCAPLUS  
CN 2-Butenedioic acid (2Z)-, dimethyl ester, polymer with methyloxirane  
polymer with oxirane ether with 2,2'-iminobis[ethanol] (2:1) (9CI) (CA  
INDEX NAME)

CM 1

CRN 624-48-6  
CMF C6 H8 O4

Double bond geometry as shown.



CM 2

CRN 79805-70-2

CMF C4 H11 N O2 . 2 (C3 H6 O . C2 H4 O)x

CM 3

CRN 111-42-2  
CMF C4 H11 N O2

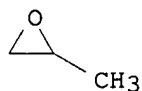
HO-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-OH

CM 4

CRN 9003-11-6  
CMF (C3 H6 O . C2 H4 O)x  
CCI PMS

CM 5

CRN 75-56-9  
CMF C3 H6 O



CM 6

CRN 75-21-8  
CMF C2 H4 O



L60 ANSWER 43 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN  
AN 1979:138412 HCAPLUS  
DN 90:138412  
TI Phosphoric acid esters  
IN Reitz, Gunther; Boehmke, Guenther; Jakobs, Karl Hans  
PA Bayer A.-G., Fed. Rep. Ger.  
SO Ger. Offen., 32 pp.  
CODEN: GWXXBX

DT Patent  
LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2726854	A1	19790111	DE 1977-2726854	19770615
	EP 125	A1	19790110	EP 1978-100114	19780607
	EP 125	B1	19811202		
	R: CH, DE, FR, GB				

JP 54005923 A2 19790117 JP 1978-70480 19780613  
 US 4258448 A 19810331 US 1978-915019 19780613  
 PRAI DE 1977-2726854 19770615

AB Polyesters useful as dispersants, leveling agents, builders, and the like were prepared from H<sub>3</sub>PO<sub>4</sub>, polyols and(or) epoxides, and optionally **polycarboxylic** acids in mol ratios of 0.05-1.5:1:0-1.5. Thus, 47 g P<sub>2</sub>O<sub>5</sub> and 33 g H<sub>3</sub>PO<sub>4</sub> were heated, mixed, cooled, treated with 124 g ethylene glycol and 1 g NaH<sub>2</sub>PO<sub>2</sub>, slowly heated to 180°, heated at 180° while 35 g water was distilled, cooled, treated with 98 g maleic anhydride, and heated 6 h at 190-200° under slowly increasing vacuum, distilling an addnl. 10 g liquid. The melt was cooled, mixed with 1 L water, and adjusted to pH 5-6 with 50% aqueous NaOH, giving a 20% aqueous solution of the polyester [69794-26-9].

IC C07F009-09  
 CC 35-3 (Synthetic High Polymers)  
 IT Polymerization  
 (of phosphoric and phosphorous acids with polyols and **polycarboxylic** acids)

IT Polyphosphoric acids  
 RL: USES (Uses)  
 (polymers with polyols and **polycarboxylic** acids)

IT 56-81-5DP, polymers with polyphosphoric acids and **polycarboxylic** acids 75-56-9DP, polymers with polyphosphoric acids and triethanolamine 102-71-6DP, polymers with polyphosphoric acids and propylene oxide 13598-36-2DP, polymers with glycerol, phthalic anhydride, and polyphosphoric acids 15743-39-2DP, polymers with polyphosphoric acids

69761-10-0P	69794-09-8P	69794-10-1P	69794-11-2P	69794-12-3P
69794-13-4P	69794-14-5P	69794-15-6P	69794-16-7P	69794-17-8P
<b>69794-18-9P</b>	69794-19-0P	69794-20-3P	69794-21-4P	
69794-22-5P	69794-23-6P	69794-24-7P	69794-25-8P	69794-26-9P
69822-48-6P				

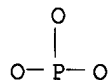
RL: **PREP (Preparation)**  
 (preparation of)

IT **69794-18-9P**  
 RL: **PREP (Preparation)**  
 (preparation of)

RN 69794-18-9 HCAPLUS  
 CN Phosphoric acid, polymer with 2,5-furandione, 2,2',2''-nitrilotris[ethanol] and phosphonic acid (9CI) (CA INDEX NAME)

CM 1

CRN 13598-36-2  
 CMF H3 O3 P

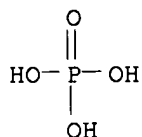


\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 2

CRN 7664-38-2  
 CMF H3 O4 P

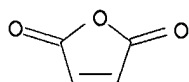




CM 3

CRN 108-31-6

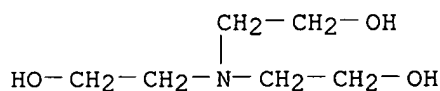
CMF C4 H2 O3



CM 4

CRN 102-71-6

CMF C6 H15 N O3



L60 ANSWER 44 OF 44 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1967:517717 HCAPLUS

DN 67:117717

TI Substituted acrylamides and polymers therefrom

IN Kelley, Everett J.

PA Rohm and Haas Co.

SO U.S., 7 pp.

CODEN: USXXAM

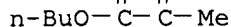
DT Patent

LA English

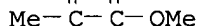
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3350336		19671031	US	19641229
AB	<p>The title compds. were prepared and used as chemical intermediates and as components in oil-modified alkyd resins to reduce the yellowing tendency of the films. Thus, a mixture containing N-methylolmethacrylamide 173, N,N-bis(carbethoxyethyl)amine 326, C6H6 326, and p-methoxyphenol 0.5 g. was refluxed for 10 hrs., during which 27 g. H2O was collected by a water separator. The C6H6 was removed in vacuo at 100°, and the viscous liquid obtained was cooled and filtered to give a straw-colored N,N-bis(carbethoxyethyl)-N'-methacryloylmethylenediamine (I), n20D 1.4777 and Br number 6.26. I was homopolymd. by refluxing in C6H6 in the presence of 0.5% azobisisobutyronitrile (II). A mixture containing I 10.5, II 1.4, Me</p>				

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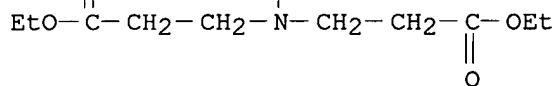


CRN 80-62-6  
CMF C5 H8 O2

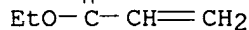


RN	30555-30-7	HCAPLUS	
CN	Methacrylic acid methyl ester, polymer with diethyl 3,3'- [(methacrylamidomethyl)imino]dipropionate and ethyl acrylate (8CI) (CA INDEX NAME)		

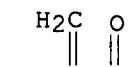
CRN 15621-02-0  
CMF C15 H26 N2 O5



CRN 140-88-5  
CMF C5 H8 O2



CRN 80-62-6  
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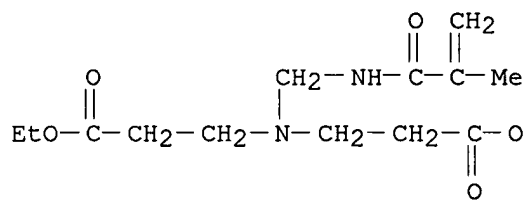
RN

CN

CM

CRM

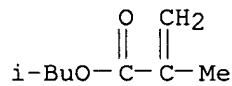
CMI



CM

CRM

CMI

 $\Rightarrow$